

**Packaged air conditioning unit
condensed by air model
RTC 07L to 30L**



Ref.: Y-R70167 0707

Technical information



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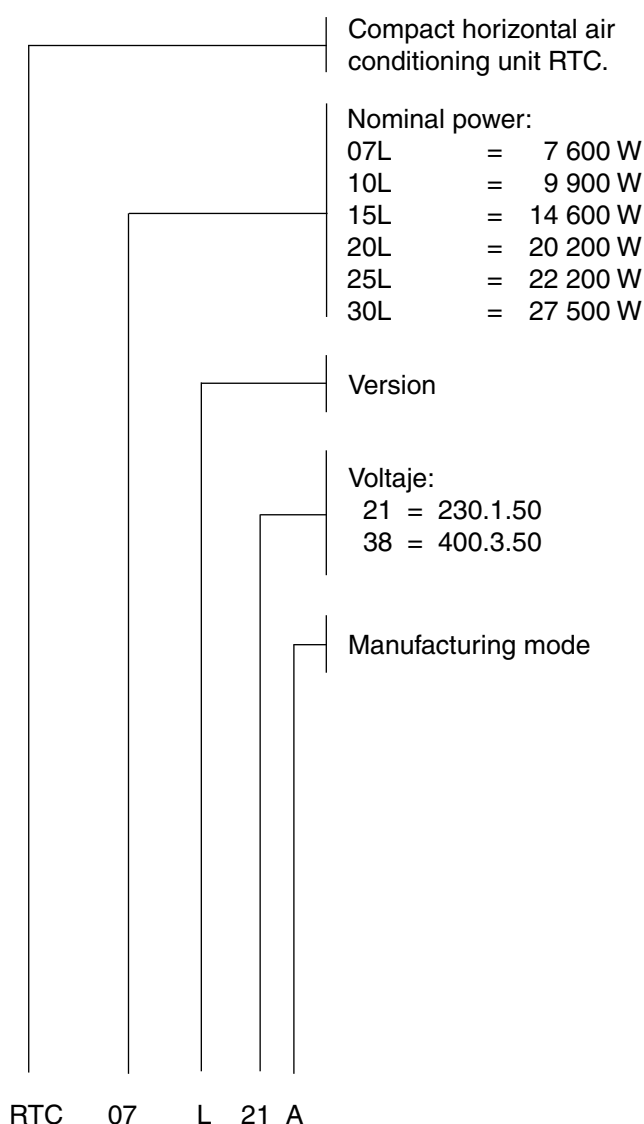
General information

General description

The RTC model air conditioners are packaged type compact horizontal units, condensed by air.

They can be installed either indoors or outdoors, and the fans are of the centrifugal type, and therefore accept ducts for channelling air.

Nomenclature



Technical specifications

Mechanical specifications

Compressor

Of the vertical hermetic type "Scroll", mounted on shock absorbers and with internal motor protection and an electric heater for heating the oil.

Coils

Made of copper tubing and aluminium fins. Located within the cabinet and completely protected against damage during transportation or installation.

Indoor and outdoor fans

Of the centrifugal type with directly fitted motor or belt drive.

These fans have sufficient available pressure for the installation of optional ducts and accessories.

Casing

Made of galvanized steel sheeting and finished with oven-polymerized powdered paint. This allows installing outdoors. Internally, in the evaporating unit area, it is coated with insulation to avoid condensation. These units include a galvanized sheeting tray with corresponding drain for collection of condensates from the evaporating coil.

Cooling circuit

Made of welded copper tubing. All units are supplied with a corresponding optimized refrigerant charge and having surpassed the maximum pressure and leak-tightness tests. Refrigerant expansion, which takes place in the internal section, is carried out by means of a calibrated and distributed hole in 07L, 10L and 15L sizes, and with expansion valve and distributor in 20L, 25L and 30L. The circuit includes: high and low pressure switches and suction and discharge pressure intakes.

Refrigerant

These units are manufactured with R-410A.

Electric panel

Accessible directly from the outside. Includes connecting strip, protectors, electronic board and probes, power supply contactors, operating relay, phase control relay and transformer. In compliance with European regulations currently in force.

Phase control relay

The electric panel of the unit RTC20L, 25L and 30L introduces a sequence and phase failure detector. In the case of detecting a phase sequence other than R-S-T, or a phase fails once the unit is in operation, this detector, by means of an internal volt-free contact, disconnects power supply to the main board of the unit, leaving it inoperative.

Electric heater (optional)

Of the exposed wire type to allow fast heat dispersion, avoiding temperature inertia that could affect the components. Equipped with a contactor and thermal protectors: automatic and manual reset.

Thermostat

The RTC07L to 30L units include, as standard equipment, the electromechanical DPC-1 thermostat.

To connect the thermostat to the board, 10x0.22mm² screened communication cable should be used.

Ambient thermostat DPC-1

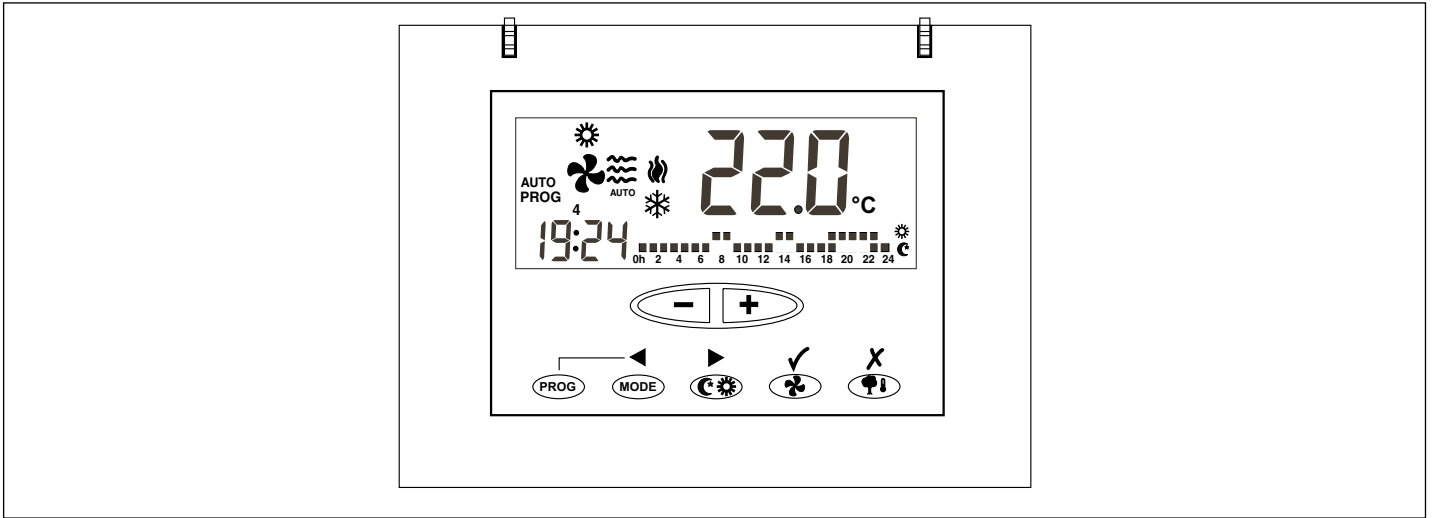
Programmable digital thermostat with communication

This thermostat was designed to give close control of the ambient temperature and graphic information regarding the mode it is currently operating in. This control unit, in accordance with the differential between the programmed temperature and the ambient temperature, responds varying the on/off cycles.

The liquid crystal display (LCD) normally indicates the ambient temperature, operating mode and whether the system is in heat or cool.

It allows selecting different set point temperatures for cool

and heat, besides choosing between °C and °F on the display. or in operation along with the compressor. Fan operation can be in continuous or automatic mode, off



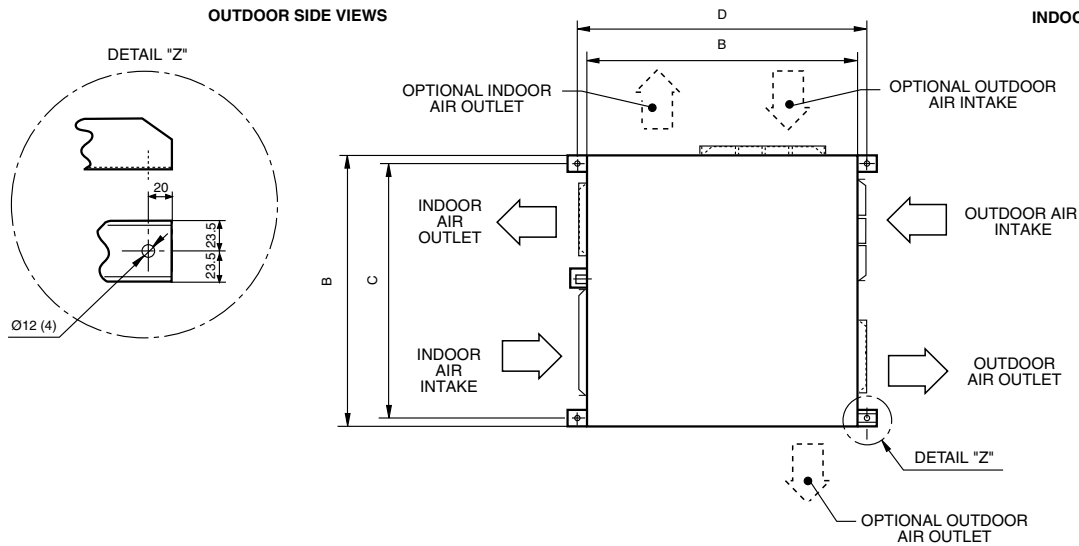
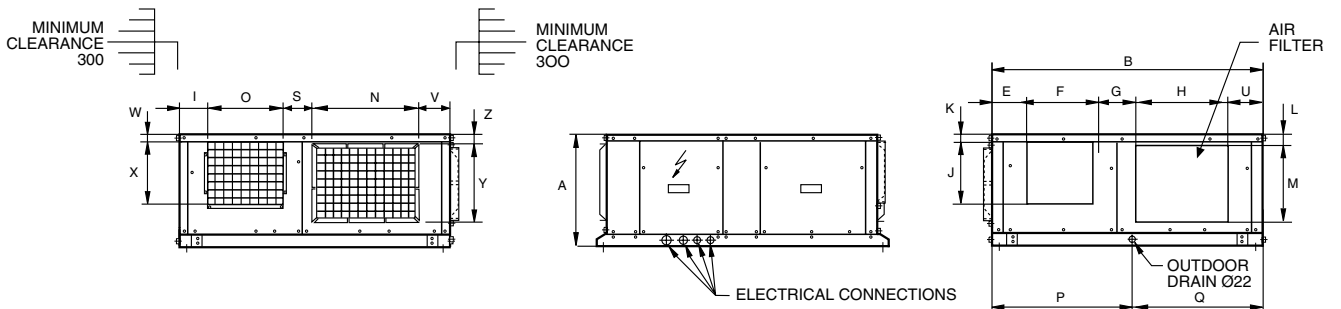
Physical data

| Model | | RTC07L | RTC10L | RTC15L | RTC20L | RTC25L | RTC30L |
|-------------------------------------|-----------------------------|--------------|--------------|--------------|------------|------------|----------|
| Compressor | Amount | 1 | | | | | |
| | Type | Scroll | | | | | |
| | Nominal power kW | 2.7 | 3.2 | 4.7 | 5.2 | 7.9 | 9.2 |
| | Power supply V.ph.Hz. | 230.1.50 | 400.3.50 | 400.3.50 | 400.3.50 | 400.3.50 | 400.3.50 |
| Indoor coil | Amount | 1 | | | | | |
| | Tubing depth x height | 5 x 18 | 5 x 21 | 5 x 21 | 5 x 21 | 5 x 24 | 5 x 24 |
| | Fins per inch | 12 | 12 | 12 | 12 | 14 | 14 |
| | Front area m ² | 0.32 | 0.41 | 0.51 | 0.65 | 0.71 | 0.87 |
| | Tubing diameter mm (Inches) | 9.52 (3/8") | | | | | |
| Outdoor coil | Amount | 1 | | | | | |
| | Tubing depth x height | 3 x 18 | 4 x 21 | 4 x 21 | 4 x 21 | 4 x 24 | 4 x 24 |
| | Fins per inch | 12 | | | | | |
| | Front area m ² | 0.22 | 0.25 | 0.37 | 0.47 | 0.61 | 0.73 |
| | Tubing diameter mm (Inches) | 9.52 (3/8") | | | | | |
| Outdoor fan motor | Amount | 1 | | | | | (1) |
| | Turbine diameter mm | 270 | 320 | 320 | 320 | 320 | 320 |
| | Turbine width mm | 270 | 240 | 240 | 320 | 320 | 320 |
| | Nominal power kW | 0.58 | 0.99 | 0.99 | 1.1 | 1.1 | 1.5 |
| | Motor nominal r.p.m. | 900 | 900 | 900 | 900 | 900 | 1 420 |
| | Power supply V.ph.Hz. | 230.1.50 | 230.1.50 | 230.1.50 | 400.3.50 | 400.3.50 | 400.3.50 |
| Indoor fan motor | Amount | 1 | | | | (1) | (1) |
| | Turbine diameter mm | 240 | 270 | 320 | 320 | 320 | 320 |
| | Turbine width mm | 240 | 200 | 240 | 240 | 240 | 320 |
| | Nominal power kW | 0.38 | 0.54 | 0.95 | 0.99 | 1.1 | 1.1 |
| | Motor nominal r.p.m. | 900 | 900 | 900 | 900 | 1 410 | 1 410 |
| | Power supply V.ph.Hz. | 230.1.50 | 230.1.50 | 230.1.50 | 400.3.50 | 400.3.50 | 400.3.50 |
| Refrigerant load R-410A kg | 2 | 2.7 | 4.5 | 5.1 | 6.4 | 7 | |
| Approximate nett weight kg | 172 | 180 | 214 | 275 | 345 | 405 | |
| Approximate gross weight kg | 183 | 195 | 230 | 295 | 365 | 440 | |
| Dimensions with standard packing cm | 122x124x64 | 119x125x71.5 | 135x141x71.5 | 167x161x74.5 | 176x180x80 | 181x216x80 | |

(1) Belt drive General dimensions mm

Note:

RTC07L, 10L, 15L and 20L

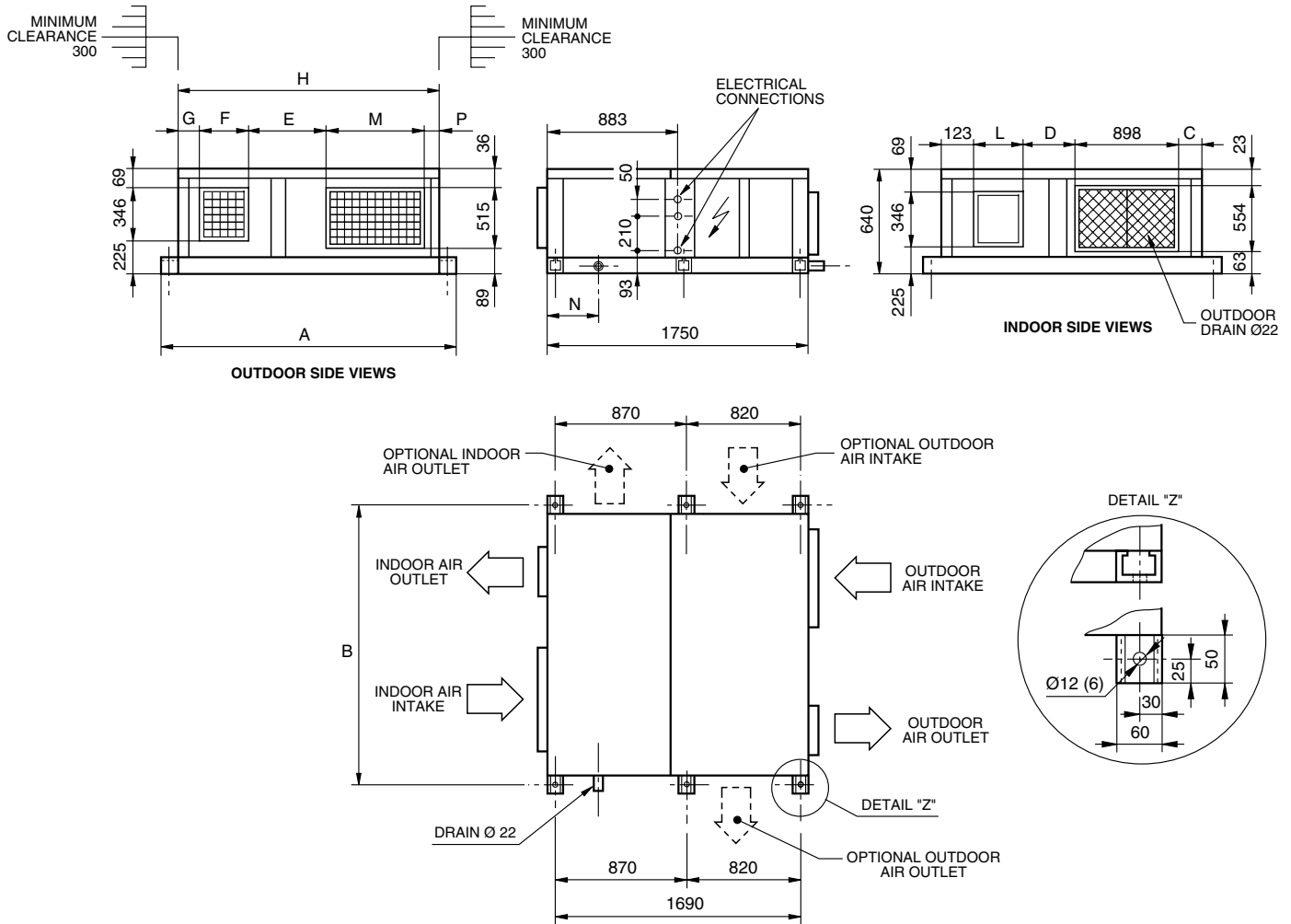


1- The solid arrows indicate the standard air intakes and outlets. The dotted arrows are the intakes and outlets that can be obtained at job site.

| Model | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | S | U | V | W | X | Y | Z |
|---------------|-----|------|------|------|-----|-----|-----|-----|----|-----|------|----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|
| RTC07L | 478 | 1100 | 1055 | 1150 | 117 | 302 | 136 | 425 | 82 | 262 | 72,5 | 60 | 300 | 425 | 347 | 600 | 500 | 165 | 120 | 82 | 18 | 305 | 342 | 40 |
| RTC10L | 555 | 1150 | 1105 | 1200 | 130 | 270 | 210 | 375 | 82 | 294 | 101 | 50 | 420 | 404 | 323 | 600 | 550 | 220 | 165 | 117 | 20 | 353 | 430 | 40 |
| RTC15L | 555 | 1310 | 1265 | 1360 | 140 | 316 | 154 | 600 | 87 | 346 | 24 | 45 | 425 | 554 | 323 | 600 | 710 | 225 | 100 | 121 | 20 | 353 | 430 | 40 |
| RTC20L | 585 | 1570 | 1525 | 1620 | 140 | 316 | 210 | 750 | 85 | 346 | 54 | 80 | 420 | 770 | 407 | 622 | 950 | 206 | 154 | 102 | 50 | 353 | 430 | 70 |

General dimensions mm

RTC25L and 30L



Note:

- 1- The solid arrows indicate the standard air intakes and outlets. The dotted arrows are the intakes and outlets that can be obtained at job site.
- 2- If a dilter-holder with a filter is applied to air suction, see the dimensions of the duct in the information that corresponds to this accessory.

| Model | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P |
|--------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|-----|-----|-----|
| RTC25L | 1 750 | 1 700 | 81 | 233 | 442 | 315 | 133 | 1 650 | 870 | 1 690 | 1 750 | 315 | 667 | 348 | 93 |
| RTC30L | 2 150 | 2 100 | 130 | 499 | 648 | 400 | 138 | 2 050 | 890 | 1 710 | 1 770 | 400 | 732 | 368 | 132 |

Nominal capacities

| Unit | Cooling capacity W | Consumption W |
|--------|--------------------|---------------|
| RTC07L | 7 600 | 3 100 |
| RTC10L | 9 900 | 4 100 |
| RTC15L | 14 600 | 5 800 |
| RTC20L | 20 200 | 9 200 |
| RTC25L | 22 200 | 10 100 |
| RTC30L | 27 500 | 12 500 |

Test conditions

| Voltage | Outdoor temp. °C | | Indoor temp. °C | |
|------------|------------------|----|-----------------|----|
| | DB | WB | DB | WB |
| 230 or 400 | 35 | 24 | 27 | 19 |

Correcting factors

Correcting factors for cooling capacities in accordance with indoor and outdoor temperatures.

| Indoor intake air temp. °C WB | Outdoor air intake temperature °C DB | | | | | |
|-------------------------------|--------------------------------------|------|------|------|------|------|
| | 19 | 25 | 30 | 35 | 40 | 46 |
| 23 | - | 1.20 | 1.15 | 1.11 | 1.06 | 1 |
| 19 | 1.10 | 1.08 | 1.04 | 1 | 0.96 | 0.90 |
| 14 | 0.88 | 0.86 | 0.84 | 0.82 | 0.79 | 0.74 |

Note: For indoor intake temperatures DB to the indoor coil between 21 and 32°C. WB-wet bulb. DB-dry bulb.

Cooling capacity correcting factors for flows that differ from the nominal flows of the evaporating coil.

| Flow % | 80 | 90 | 100 | 110 | 120 | 130 |
|----------------------|-------|-------|-----|-------|-------|-------|
| Total capacity | 0.960 | 0.980 | 1 | 1.016 | 1.032 | 1.046 |
| Sensible capacity | 0.945 | 0.973 | 1 | 1.038 | 1.075 | 1.118 |
| Comp. absorbed power | 0.980 | 0.990 | 1 | 1.009 | 1.017 | 1.025 |

Correction of the real temperature of air intake to the condensing coil in °C, for flows that differ from the nominal values.

| Flow % | 70 | 80 | 90 | 100 | 110 | 120 | 130 |
|--|----|----|-----|-----|-----|-----|------|
| Correction in °C on real temperature of air intake to the outdoor coil | 5 | 3 | 1.5 | 0 | -1 | -2 | -2.5 |

Nominal flows

| Model | Indoor fan m ³ /h | Nominal pressure available Pa | Outdoor fan m ³ /h | Nominal pressure available Pa |
|--------|------------------------------|-------------------------------|-------------------------------|-------------------------------|
| RTC07L | 1 490 | 25 | 2 420 | 50 |
| RTC10L | 2 015 | 37 | 3 520 | 50 |
| RTC15L | 3 580 | 50 | 3 890 | 50 |
| RTC20L | 4 100 | 50 | 4 810 | 50 |
| RTC25L | 5 060 | 62 | 5 640 | 50 |
| RTC30L | 5 300 | 62 | 7 450 | 50 |

For other flows, apply the correcting factors of the corresponding table.

Sensible cooling capacities

| Model | Dry temperature, outdoor air °C (DB) | Humid temperature, air intake, °C (WB) | Total capacity | Sensible capacity (W) | | | | Compressor absorbed power kW |
|--------|--------------------------------------|--|----------------|---|--------|--------|--------|------------------------------|
| | | | | Dry intake air temperature to coil, °C (DB) | | | | |
| | | | W | 22 | 24 | 27 | 29 | |
| RTC07L | 25 | 22 | 9 120 | 2 851 | 3 718 | 5 018 | 5 886 | 2.00 |
| | | 19 | 8 208 | 4 199 | 5 066 | 6 366 | 7 234 | 2.09 |
| | | 17 | 7 600 | 5 080 | 5 947 | 7 247 | 7 600 | 2.19 |
| | 35 | 22 | 8 436 | 2 608 | 3 475 | 4 775 | 5 641 | 2.26 |
| | | 19 | 7 600 | 3 959 | 4 826 | 6 126 | 6 993 | 2.38 |
| | | 17 | 6 992 | 4 355 | 5 221 | 6 521 | 6 992 | 2.50 |
| | 45 | 22 | 7 600 | 2 338 | 3 205 | 4 505 | 5 372 | 2.62 |
| | | 19 | 6 840 | 3 687 | 4 553 | 5 853 | 6 720 | 2.74 |
| | | 17 | 6 232 | 4 509 | 5 375 | 6 232 | 6 232 | 2.86 |
| RTC10L | 25 | 22 | 11 880 | 3 663 | 4 906 | 6 771 | 8 016 | 2.44 |
| | | 19 | 10 692 | 5 597 | 6 840 | 8 705 | 9 950 | 2.55 |
| | | 17 | 9 900 | 6 864 | 8 107 | 9 900 | 9 900 | 2.67 |
| | 35 | 22 | 10 989 | 3 354 | 4 597 | 6 461 | 7 705 | 2.76 |
| | | 19 | 9 900 | 5 291 | 6 534 | 8 399 | 9 642 | 2.90 |
| | | 17 | 9 108 | 6 148 | 7 391 | 9 108 | 9 108 | 3.05 |
| | 45 | 22 | 9 900 | 3 010 | 4 253 | 6 118 | 7 361 | 3.19 |
| | | 19 | 8 910 | 4 943 | 6 186 | 8 051 | 8 910 | 3.34 |
| | | 17 | 8 118 | 6 133 | 7 376 | 8 118 | 8 118 | 3.48 |
| RTC15L | 25 | 22 | 17 520 | 5 286 | 7 459 | 10 720 | 12 897 | 3.39 |
| | | 19 | 15 768 | 8 666 | 10 840 | 14 100 | 15 768 | 3.56 |
| | | 17 | 14 600 | 10 888 | 13 062 | 14 600 | 14 600 | 3.72 |
| | 35 | 22 | 16 206 | 4 845 | 7 019 | 10 280 | 12 453 | 3.84 |
| | | 19 | 14 600 | 8 229 | 10 403 | 13 663 | 14 600 | 4.04 |
| | | 17 | 13 432 | 9 758 | 11 932 | 13 432 | 13 432 | 4.24 |
| | 45 | 22 | 14 600 | 4 355 | 6 528 | 9 789 | 11 963 | 4.44 |
| | | 19 | 13 140 | 7 730 | 9 904 | 13 140 | 13 140 | 4.65 |
| | | 17 | 11 972 | 9 839 | 11 972 | 11 972 | 11 972 | 4.85 |

Sensible cooling capacities

| Model | Dry temperature, outdoor air °C (DB) | Humid temperature, air intake, °C (WB) | Total capacity | Sensible capacity (W) | | | | Compressor absorbed power kW |
|---------------|---|---|----------------|---|--------|--------|--------|---------------------------------|
| | | | | Dry intake air temperature to coil, °C (DB) | | | | |
| | | | W | 22 | 24 | 27 | 29 | |
| RTC20L | 25 | 22 | 24 240 | 7 484 | 9 996 | 13 764 | 16 280 | 5.72 |
| | | 19 | 21 816 | 10 599 | 13 111 | 16 879 | 19 396 | 5.99 |
| | | 17 | 20 200 | 13 952 | 16 464 | 20 200 | 20 200 | 6.27 |
| | 35 | 22 | 22 422 | 6 851 | 9 363 | 13 131 | 15 643 | 6.47 |
| | | 19 | 20 200 | 9 986 | 12 499 | 16 267 | 18 779 | 6.81 |
| | | 17 | 18 584 | 12 435 | 14 947 | 18 584 | 18 584 | 7.15 |
| | 45 | 22 | 20 200 | 6 148 | 8 660 | 12 428 | 14 940 | 7.49 |
| | | 19 | 18 180 | 9 289 | 11 801 | 15 569 | 18 081 | 7.83 |
| | | 17 | 16 564 | 12 458 | 14 970 | 16 564 | 16 564 | 8.17 |
| RTC25L | 25 | 22 | 26 640 | 8 096 | 11 210 | 15 881 | 18 999 | 6.75 |
| | | 19 | 23 976 | 11 981 | 15 094 | 19 765 | 22 884 | 7.08 |
| | | 17 | 22 200 | 16 120 | 19 234 | 22 200 | 22 200 | 7.40 |
| | 35 | 22 | 24 642 | 7 418 | 10 532 | 15 203 | 18 317 | 7.64 |
| | | 19 | 22 200 | 11 323 | 14 437 | 19 107 | 22 200 | 8.04 |
| | | 17 | 20 424 | 14 509 | 17 623 | 20 424 | 20 424 | 8.44 |
| | 45 | 22 | 22 200 | 6 664 | 9 778 | 14 449 | 17 563 | 8.84 |
| | | 19 | 19 980 | 10 572 | 13 686 | 18 357 | 19 980 | 9.25 |
| | | 17 | 18 204 | 14 511 | 17 625 | 18 204 | 18 204 | 9.65 |
| RTC30L | 25 | 22 | 33 000 | 10 240 | 13 540 | 18 490 | 21 794 | 7.56 |
| | | 19 | 29 700 | 14 323 | 17 623 | 22 572 | 25 878 | 7.92 |
| | | 17 | 27 500 | 18 733 | 22 032 | 26 982 | 27 500 | 8.28 |
| | 35 | 22 | 30 525 | 9 371 | 12 671 | 17 620 | 20 920 | 8.55 |
| | | 19 | 27 500 | 13 483 | 16 782 | 21 732 | 25 031 | 9 |
| | | 17 | 25 300 | 16 830 | 20 130 | 25 079 | 25 300 | 9.45 |
| | 45 | 22 | 27 500 | 8 407 | 11 706 | 16 656 | 19 955 | 9.90 |
| | | 19 | 24 750 | 12 526 | 15 826 | 20 775 | 24 075 | 10.35 |
| | | 17 | 22 550 | 16 685 | 19 984 | 22 550 | 22 550 | 10.80 |

Indoor fan services

| Model | Available static pressure | | Air flow | | Absorbed power W |
|--------|---------------------------|-------|-------------------|-------------------|------------------|
| | mm WG | Pa | m ³ /h | m ³ /s | |
| RTC07L | 8 | 78.4 | 1 053 | 0.29 | 342 |
| | 6 | 58.8 | 1 204 | 0.33 | 346 |
| | 4 | 39.2 | 1 355 | 0.37 | 351 |
| | 2.5 | 24.5 | 1 490 | 0.41 | 368 |
| | 2 | 19.6 | 1 517 | 0.42 | 369 |
| | 0 | 0 | 1 630 | 0.45 | 374 |
| | RTC10L | 12 | 117.7 | 1 491 | 0.41 |
| 10 | | 98 | 1 657 | 0.46 | 390 |
| 8 | | 78.4 | 1 789 | 0.49 | 400 |
| 6 | | 58.8 | 1 913 | 0.53 | 415 |
| 4 | | 39.2 | 2 006 | 0.55 | 428 |
| 3.8 | | 37.3 | 2 015 | 0.56 | 428 |
| 2 | | 19.6 | 2 108 | 0.58 | 435 |
| 0 | | 0 | 2 199 | 0.61 | 450 |
| RTC15L | 18 | 176.5 | 2 690 | 0.75 | 786 |
| | 16 | 156.8 | 2 842 | 0.79 | 808 |
| | 14 | 137.2 | 2 993 | 0.83 | 828 |
| | 12 | 117.6 | 3 144 | 0.87 | 847 |
| | 10 | 98 | 3 271 | 0.91 | 873 |
| | 8 | 78.4 | 3 399 | 0.94 | 898 |
| | 6 | 58.8 | 3 518 | 0.97 | 907 |
| | 5.1 | 50 | 3 580 | 0.99 | 915 |
| | 4 | 39.2 | 3 637 | 1.01 | 950 |
| | 2 | 19.6 | 3 784 | 1.05 | 964 |
| 0 | 0 | 3 859 | 1.07 | 978 | |
| RTC20L | 20 | 196 | 2 900 | 0.90 | 824 |
| | 18 | 176.5 | 3 045 | 0.96 | 872 |
| | 16 | 156.8 | 3 260 | 0.99 | 922 |
| | 14 | 137.2 | 3 400 | 1.01 | 960 |
| | 12 | 117.6 | 3 580 | 1.07 | 1 000 |
| | 10 | 98.0 | 3 740 | 1.11 | 1 036 |
| | 8 | 78.4 | 3 890 | 1.14 | 1 075 |
| | 6 | 58.8 | 4 030 | 1.17 | 1 125 |
| | 5.1 | 50 | 4 100 | 1.19 | 1 150 |
| | 4 | 39.2 | 4 240 | 1.2 | 1 162 |
| | 2 | 19.6 | 4 300 | 1.24 | 1 187 |
| 0 | 0 | 4 420 | 1.27 | 1 212 | |
| RTC25L | 16 | 156.8 | 4 050 | 1.12 | 1 015 |
| | 12 | 117.6 | 4 535 | 1.25 | 1 160 |
| | 10 | 98 | 4 699 | 1.3 | 1 210 |
| | 8 | 78.4 | 4 916 | 1.36 | 1 275 |
| | 6.3 | 61.7 | 5 060 | 1.4 | 1 330 |
| | 4 | 39.2 | 5 243 | 1.46 | 1 392 |
| | 2 | 19.6 | 5 401 | 1.5 | 1 446 |
| | 0 | 0 | 5 560 | 1.54 | 1 500 |
| RTC30L | 16 | 156.8 | 4 098 | 1.14 | 830 |
| | 12 | 117.6 | 4 602 | 1.28 | 973 |
| | 10 | 98 | 4 854 | 1.35 | 1 044 |
| | 6.3 | 61.7 | 5 300 | 1.47 | 1 213 |
| | 4 | 39.2 | 5 541 | 1.54 | 1 239 |
| | 2 | 19.6 | 5 734 | 1.59 | 1 297 |
| | 0 | 0 | 5 928 | 1.64 | 1 356 |

Outdoor fan services

| Model | Available static pressure | | Air flow | | Absorbed power W | |
|--------|---------------------------|-------|-------------------|-------------------|------------------|-------|
| | mm WG | Pa | m ³ /h | m ³ /s | | |
| RTC07L | 12 | 117.7 | 1 891 | 0.52 | 402 | |
| | 10 | 98 | 2 055 | 0.57 | 414 | |
| | 8 | 78.4 | 2 219 | 0.62 | 427 | |
| | 6 | 58.8 | 2 360 | 0.65 | 442 | |
| | 5.1 | 50 | 2 420 | 0.67 | 450 | |
| | 4 | 39.2 | 2 501 | 0.69 | 458 | |
| | 2 | 19.6 | 2 642 | 0.73 | 473 | |
| | 0 | 0 | 2 772 | 0.77 | 490 | |
| | RTC10L | 16 | 156.8 | 2 859 | 0.79 | 794 |
| | | 14 | 137.2 | 2 985 | 0.83 | 814 |
| 12 | | 117.6 | 3 112 | 0.86 | 844 | |
| 10 | | 98 | 3 241 | 0.90 | 866 | |
| 8 | | 78.4 | 3 369 | 0.93 | 887 | |
| 6 | | 58.8 | 3 476 | 0.96 | 905 | |
| 5.1 | | 50 | 3 520 | 0.98 | 919 | |
| 4 | | 39.2 | 3 579 | 0.99 | 928 | |
| 2 | | 19.6 | 3 665 | 1.02 | 953 | |
| 0 | | 0 | 3 764 | 1.04 | 971 | |
| RTC15L | | 16 | 156.8 | 3 184 | 0.88 | 860 |
| | 14 | 137.2 | 3 326 | 0.92 | 882 | |
| | 12 | 117.6 | 3 468 | 0.96 | 905 | |
| | 10 | 98 | 3 599 | 1.00 | 935 | |
| | 8 | 78.4 | 3 731 | 1.03 | 965 | |
| | 6 | 58.8 | 3 810 | 1.06 | 980 | |
| | 5.1 | 50 | 3 890 | 1.08 | 995 | |
| | 4 | 39.2 | 3 954 | 1.09 | 1 010 | |
| | 2 | 19.6 | 4 050 | 1.12 | 1 030 | |
| | 0 | 0 | 4 145 | 1.15 | 1 050 | |
| | RTC20L | 16 | 156.8 | 3 705 | 1.03 | 933 |
| | | 14 | 137.2 | 3 944 | 1.09 | 937 |
| 12 | | 117.6 | 4 183 | 1.16 | 941 | |
| 10 | | 98.0 | 4 369 | 1.21 | 957 | |
| 8 | | 78.2 | 4 556 | 1.26 | 1 075 | |
| 6 | | 58.7 | 4 723 | 1.31 | 1 091 | |
| 5.1 | | 50 | 4 810 | 1.33 | 1 104 | |
| 4 | | 39.1 | 4 900 | 1.36 | 1 131 | |
| 2 | | 19.6 | 5 090 | 1.41 | 1 184 | |
| 0 | | 0.0 | 5 227 | 1.45 | 1 230 | |
| RTC25L | | 14 | 137.2 | 4 500 | 1.25 | 1 080 |
| | | 10 | 98 | 5 030 | 1.39 | 1 223 |
| | | 8 | 78.4 | 5 295 | 1.47 | 1 295 |
| | 6 | 58.8 | 5 532 | 1.53 | 1 367 | |
| | 5.1 | 50 | 5 640 | 1.56 | 1 400 | |
| | 4 | 39.2 | 5 790 | 1.61 | 1 440 | |
| | 2 | 19.6 | 6 005 | 1.67 | 1 515 | |
| | 0 | 0 | 6 240 | 1.73 | 1 595 | |
| | RTC30L | 14 | 137.2 | 6 449 | 1.79 | 1 655 |
| | | 10 | 98 | 6 931 | 1.92 | 1 874 |
| | | 8 | 78.4 | 7 158 | 1.99 | 1 983 |
| | | 5.1 | 50 | 7 450 | 2.07 | 2 065 |
| | | 4 | 39.2 | 7 553 | 2.10 | 2 145 |
| | | 2 | 19.6 | 7 742 | 2.15 | 2 219 |
| 0 | | 0 | 7 932 | 2.20 | 2 293 | |

Characteristics of the indoor/outdoor fan on pulley models

| Model | Speed range (r.p.m) | Motor | | Motor pulley (adjustable) | | Fan pulley (fixed) | | Belt | | |
|---------------|---------------------|-------|-------------|---------------------------|--------------|--------------------|--------------|-------------|------|--------|
| | | kW | Casing type | Ø pulley (mm) | Ø shaft (mm) | Ø pulley (mm) | Ø shaft (mm) | Length (mm) | Ref. | Amount |
| 25L (indoor) | 876 - 1 057 | 1.1 | 090S | 87 - 105 | 24 | 140 | 25 | 1 112 | XPZ | 1 |
| 30L (indoor) | 876 - 1 057 | 1.1 | 090S | 87 - 105 | 24 | 140 | 25 | 1 112 | XPZ | 1 |
| 30L (outdoor) | 982 - 1 185 | 1.5 | 090L | 87 - 105 | 24 | 125 | 25 | 1 112 | XPZ | 1 |

Electrical characteristics

| Model | Compressor | | | Fan Out. - Ind. | Outdoor fan motor | | Indoor fan motor | | Max. total power kW | Max. total intensity (unit) A | Max. total intensity (unit) A | Automatic switch (K curve) A | Min. cable section mm ² |
|---------------|----------------------------|---------------------------|-------------------------|----------------------------|----------------------|---------------------------|---------------------|---------------------------|------------------------------|--|--|---------------------------------------|---|
| | Power supply V.ph.Hz | Nominal intensity A | Start intensity A | Power supply V.ph.Hz | kW | Nominal intensity A | kW | Nominal intensity A | | | | | |
| RTC07L | 230.1.50 | 12 | 82 | 230.150 | 0.4 | 1.9 | 0.4 | 1.6 | 3.7 | 16 | 22 | 25 | 4 |
| RTC10L | 400.3.50 | 5.1 | 48 | 230.150 | 0.8 | 4.6 | 0.4 | 1.9 | 4.2 | 9.7 | 12.4 | 16 | 2.5 |
| RTC15L | 400.3.50 | 7 | 64 | 230.150 | 0.9 | 4.4 | 0.8 | 4.1 | 5.6 | 11.5 | 15 | 20 | 4 |
| RTC20L | 400.3.50 | 13.1 | 95 | 400.3.50 | 1.1 | 3.1 | 1 | 3.0 | 10 | 19 | 22 | 25 | 4 |
| RTC25L | 400.3.50 | 15 | 111 | 400.3.50 | 1.2 | 3 | 1.1 | 2.4 | 11 | 21 | 25 | 25 | 4 |
| RTC30L | 400.3.50 | 17 | 118 | 400.3.50 | 2 | 3.7 | 1.1 | 2.4 | 14 | 23 | 28 | 32 | 6 |

Important: Automatic switch dimensioning and power supply and operating line sections are orientative and should be corrected in accordance with conditions at job site. length between units and legislation in force.

Notes: 1.- K curve (DIN. VDE 0660-104). 2.- Based on copper conductors.

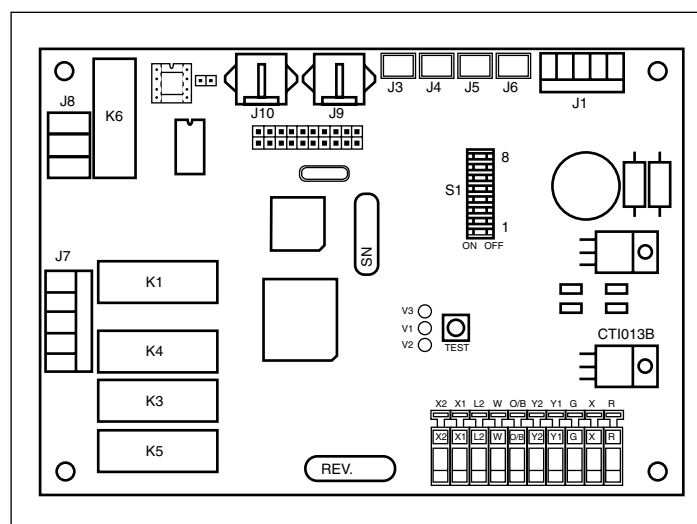
Limits of use

| Voltage limits | | | | Air intake temperature to the outdoor coil DB | | Air intake temperature to the indoor coil | |
|------------------|---------|------------------|---------|--|------------|--|------------|
| Nominal at 230 V | | Nominal at 400 V | | Maximum °C | Minimum °C | Maximum °C | Minimum °C |
| Maximum | Minimum | Maximum | Minimum | | | | |
| 254 | 198 | 436 | 342 | 46 | 19 | 22 | 14 |

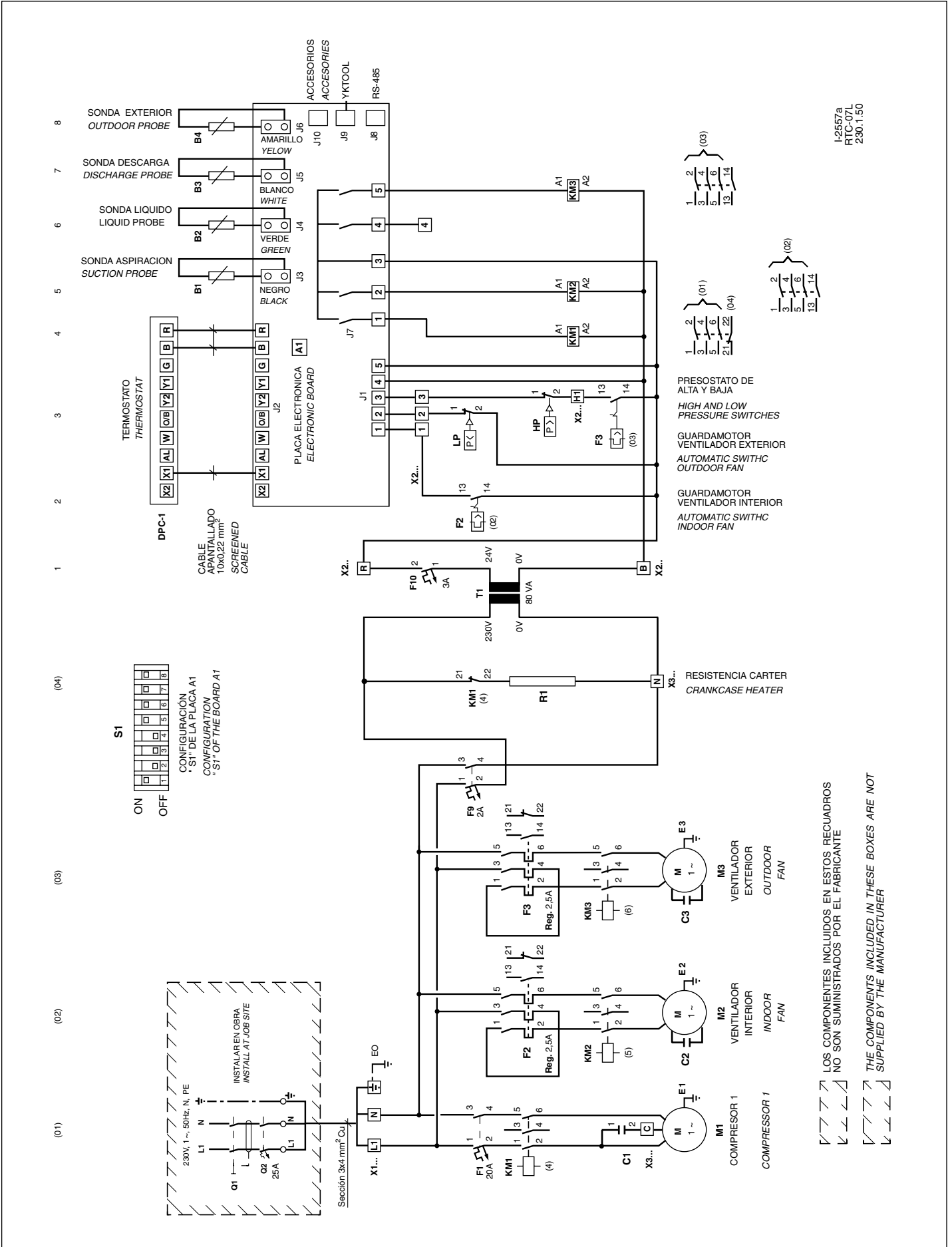
Notes: WB - wet bulb. DB - dry bulb.

Control board

The control board of these units is common to both the cool only as well as the heat pump units. Equipment control is carried out by means of software that is resident in the board. System operation is carried out in accordance with the position of the microswitches in the main board. There are also variations in the control algorithm, depending upon the accessories the board detects installed in the equipment. For further details please see Technical Information of the control board.



Wiring diagram, RTC07L, 230.1.50

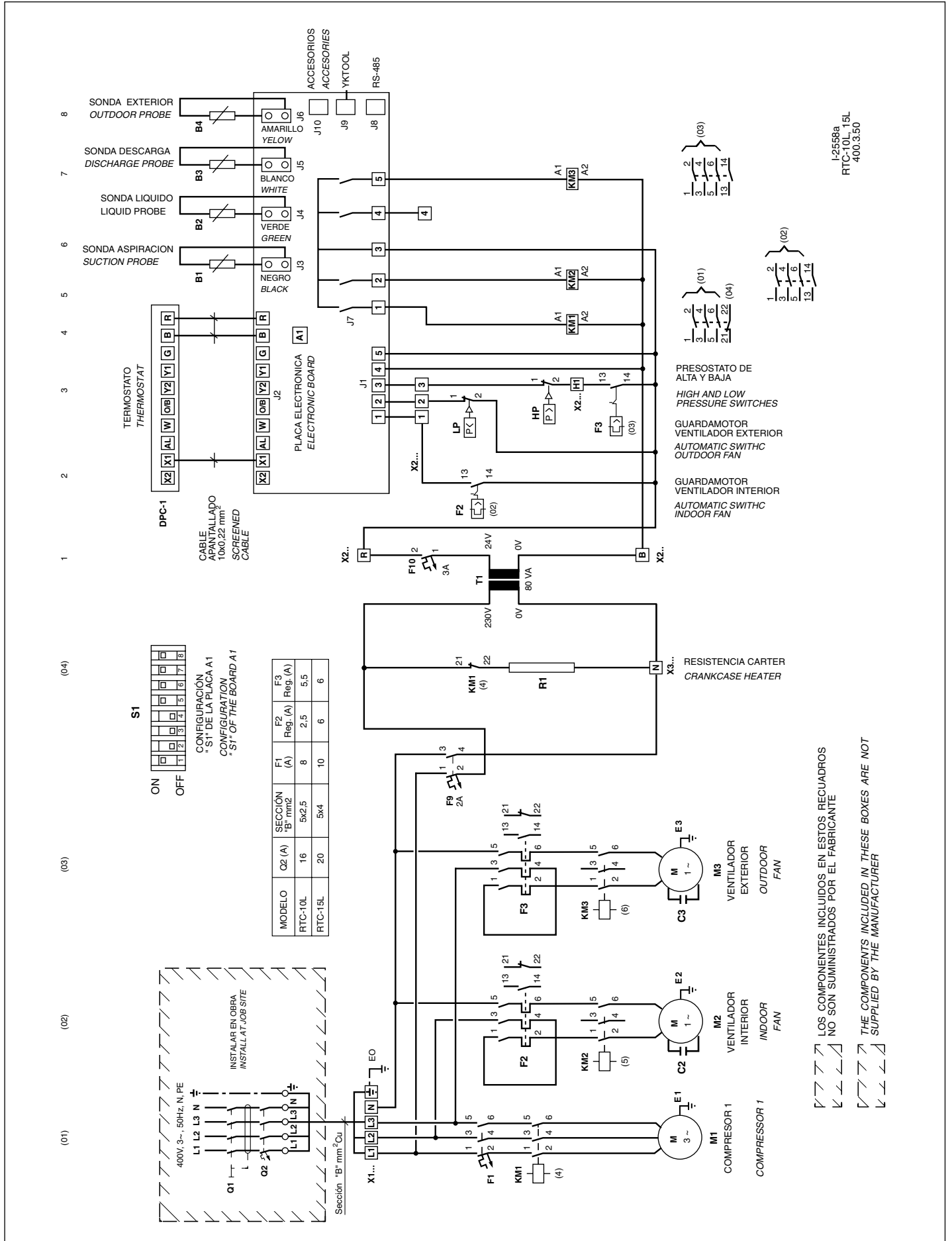


I-2557a
 RTC-07L
 230.1.50

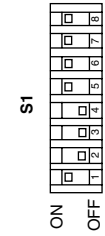
LOS COMPONENTES INCLUIDOS EN ESTOS RECUADROS
 NO SON SUMINISTRADOS POR EL FABRICANTE

THE COMPONENTS INCLUDED IN THESE BOXES ARE NOT
 SUPPLIED BY THE MANUFACTURER

Wiring diagram, RTC10L and 15L, 400.3.50

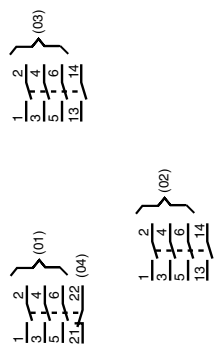
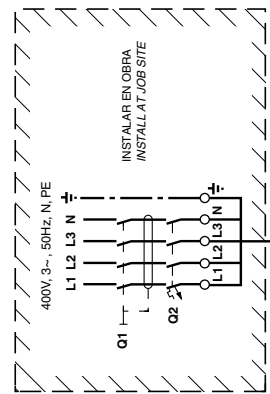


(01) (02) (03) (04)



CONFIGURACION "S1" DE LA PLACA A1
 CONFIGURATION "S1" OF THE BOARD A1

| MODELO | Q2 (A) | SECCION "B" mm ² | F1 (A) | F2 Reg. (A) | F3 Reg. (A) |
|---------|--------|-----------------------------|--------|-------------|-------------|
| RTC-10L | 16 | 5x2,5 | 8 | 2,5 | 5,5 |
| RTC-15L | 20 | 5x4 | 10 | 6 | 6 |

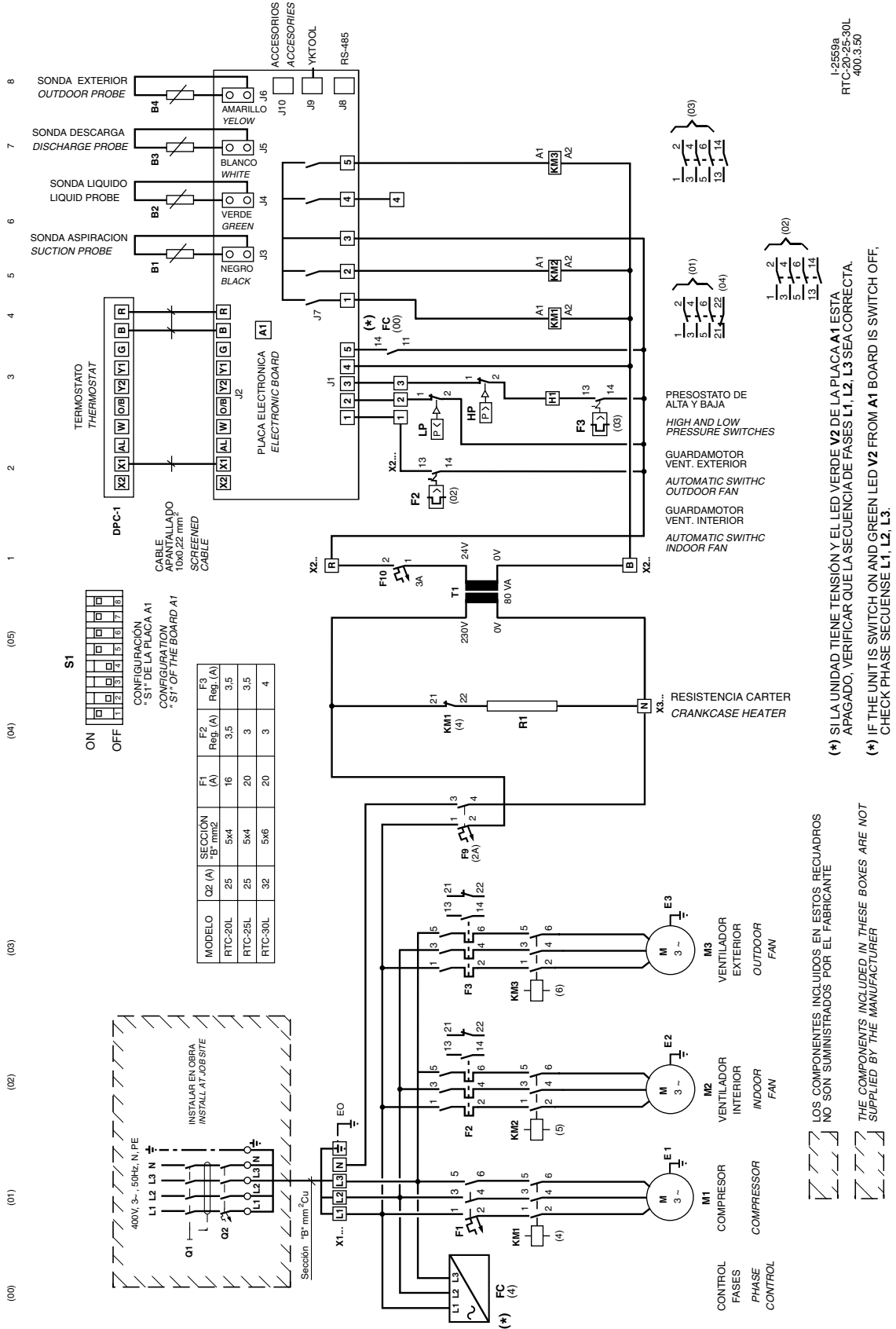


PRESTATO DE ALTA Y BAJA
 HIGH AND LOW PRESSURE SWITCHES
 GUARDAMOTOR VENTILADOR EXTERIOR
 AUTOMATIC SWITHC OUTDOOR FAN
 GUARDAMOTOR VENTILADOR INTERIOR
 AUTOMATIC SWITHC INDOOR FAN

I-2556a
 RTC-10L, 15L
 400.3.50

LOS COMPONENTES INCLUIDOS EN ESTOS RECUADROS NO SON SUMINISTRADOS POR EL FABRICANTE
 THE COMPONENTS INCLUDED IN THESE BOXES ARE NOT SUPPLIED BY THE MANUFACTURER

Wiring diagram, RTC20L, 25L and 30L, 400.3.50



Microswitches configuration, failures and incidents

Configuration of switches

The microswitches establish the following configurations:

| Number | Status | Meaning |
|--------|---------|--|
| | OFF/OFF | Ignore SW, programmed by communications |
| 1 / 2 | ON/OFF | Time between defrosts 30' |
| | OFF/ON | Time between defrosts 60' |
| | ON/ON | Time between defrosts 90' |
| 3 | ON | Crossed coils |
| | OFF | Independent coils |
| 4 | ON | 2' compressor delay |
| | OFF | 5' compressor delay |
| 5 | ON | Cool mode |
| | OFF | Heat pump mode |
| 6 | ON | 4-way valve active in heat |
| | OFF | 4-way valve active in cool |
| 7 | ON | Receives signal B from thermostat (active in heat) |
| | OFF | Receives signal O from thermostat (active in cool) |
| 8 | ON | Fan operative during defrost |
| | OFF | Fan inoperative during defrost |

It is necessary to disconnect power supply to the board to read the new configuration.

Failures (Lockouts)

Lockouts are indicated by the red LED on the YKLON board. If no lockouts exist, the LED remains off.
When a lockout is generated, this LED produces two series of flashes with a constant sequence.
The first series indicates the affected circuit; one flash for the first compressor, two for the second, three for the third and four for the accessories. This is followed by a brief pause. The second series indicates the element or situation producing the lockout.

Lockout table (red LED)

| Flashes | Failure |
|---------|---|
| 1 | Discharge temperature surpassed. |
| 2 | High pressure switch, outdoor fan thermal switch or compressor module thermal switch. |
| 3 | Low pressure switch. |
| 4 | Indoor fan thermal switch. |
| 5 | Repeated start-ups in cool or suction temperature <25° C. |
| 1 | Gas 1 control or heater 1 failure |
| 2 | Gas 2 control or heater 2 failure |
| 3 | Heater 3 stage failure |
| 4 | Heater 4 stage failure |
| 5 | Failure in economiser or hot water coil (outdoor impulse probe, water return) |
| 6 | Smoke detection or high temperature (accessories) or impulse temperature > 80°C |

Incidence

Incidents are indicated by the green LED on the YKLON board. If no lockouts exist, this LED flashes at a constant frequency.
When an incident is generated, this LED produces three series of flashes with a constant sequence.

The first series indicates the affected circuit; one flash for the first compressor, two for the second, three for the third and four for miscellaneous incidences. This is followed by a brief pause. The second and third series indicate the direct cause of the incidence.

Incidence table

| Flashes | Type | Incidence |
|---------|------|---|
| 1 | 1 | Discharge probe open or short circuited |
| 2 | 2 | Liquid probe open or short circuited |
| 3 | 3 | Suction probe open or short circuited |
| 4 | 4 | Repeated defrosts |
| 5 | 5 | Temperature |
| 6 | 6 | Discharge temperature not recovered |
| 7 | 7 | Discharge temperature not recovered |
| 8 | 8 | Return probe open or short circuited |
| 9 | 9 | Outdoor probe open or short circuited |
| 10 | 10 | Water probe open or short circuited |
| 11 | 11 | Enthalpy probe error |
| 12 | 12 | Signal Y1 or Y2 without G |
| 13 | 13 | Signal W without B |
| 14 | 14 | Signal W without G |
| 15 | 15 | Signal Y2 without Y1 |
| 16 | 16 | Thermal switch of heater 1 |
| 17 | 17 | Thermal switch of heater 2 |
| 18 | 18 | Aux. heat |
| 19 | 19 | Thermal switch of heater 3 |
| 20 | 20 | Thermal switch of heater 4 |
| 21 | 21 | Water coil temp. not recovered |
| 22 | 22 | Outdoor temp. too low |
| 23 | 23 | Water coil in antifreeze function |
| 24 | 24 | Impulse temp. over 55° C |
| 25 | 25 | Impulse temp. < 25° C with gas |
| 26 | 26 | Transceiver ID unknown |
| 27 | 27 | At least one accessory not found |
| 28 | 28 | Air quality demand |
| 29 | 29 | Dirty filters |
| 30 | 30 | Occupation sensor in unoccupied |
| 31 | 31 | Suction temperature < 0°C, economiser |

Test button

- If pressed until the green LED goes on, certain timings are shortened and any detected failure is reset.
- If pressed until the red LED goes on, two accessories and optional probes connected to the board are identified.
- If there is communication between units and this button is pressed, the Neuron ID is sent by the LonWorks network.

DPC-1 thermostat

When a lockout is generated, and there is communication, the thermostat indicates, alternatively, the time and failure produced, in accordance with the lockout table of the unit.
Also indicates other incidences of the thermostat.

| Type | Thermostat numbers | Incidence | |
|------------|--------------------|-----------|---------------------------------------|
| Thermostat | 9 | 1 | Ambient probe open or short circuited |
| | 9 | 2 | Internal probe not calibrated |
| | 9 | 3 | Communication error |
| | 9 | 4 | External entry of failure |
| | 9 | 5 | Digital probe S5 is not detected |
| | 9 | 6 | Digital probe S6 is not detected |
| | 9 | 7 | Digital probe S7 is not detected |
| | 9 | 8 | Digital probe S8 is not detected |
| | 9 | 9 | Digital probe S9 is not detected |

I-2367c

Accessories

Duct electric heaters for RTC and RTH07L to 30L

These duct electric heaters are designed to provide backup heat in the RTH units, and complementary heat in the RTC units. On and off cycles are governed by the air conditioning equipment control system. They should be fitted directly in the impulse outlet of the indoor section of the unit.

Technical specifications

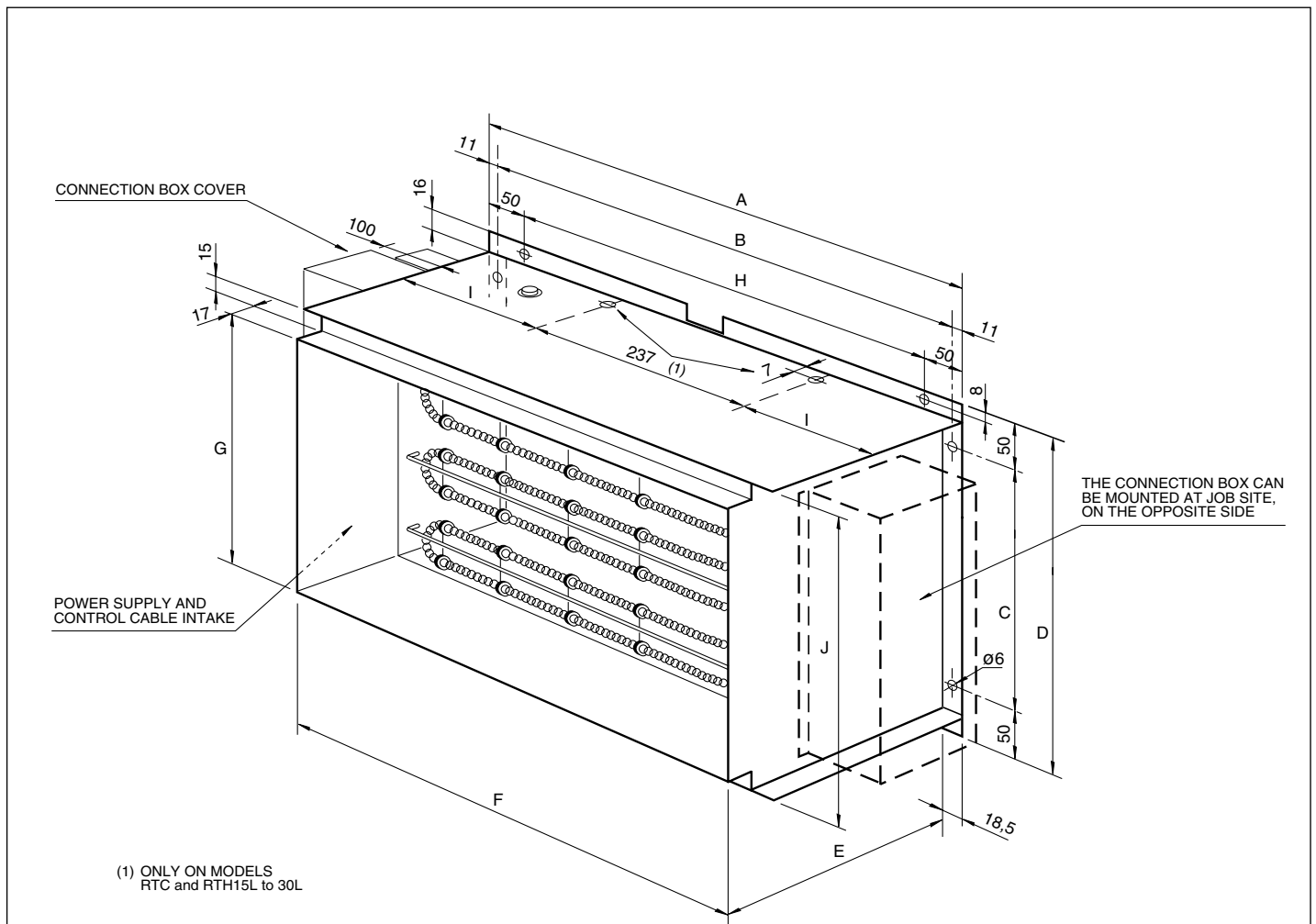
These duct electric heaters include the following components:

- Galvanised sheet casing, covers and supports.
- Exposed nickel-chrome wire electric resistance mounted

on steatite supports.

- Power supply contactor with a 24 VAC.
- Two thermal switches located at the top of the heater. The first, with automatic reset, disconnects the heater when a temperature of 77°C is reached. The second, accessible externally and with manual reset, disconnects the heater when a temperature of 138°C is reached.
- Interlock with the indoor fan thermal relay. The control system of the unit does not allow operation of the heater when the indoor fan thermal relay fails.
- Plug-in connector for interconnection between the control panel of the air conditioning unit and the heater.
- PVC gasket for heater-air conditioner joint and self-threading screws for fastening the accessory.

General dimensions mm



| Model | A | B | C | D | E | F | G | H | I | J |
|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RTC and RTH07L a 10L | 400 | 378 | 285 | 385 | 275 | 362 | 320 | 300 | - | 353 |
| RTC and RTH15L a 30L | 527 | 505 | 325 | 425 | 350 | 490 | 380 | 427 | 145 | 412 |

General characteristics

| Model | Power supply | Power | Consumption | Stages | Automatic switch (1) Q1 | Power supply cable section (2) | Front surface | Pressure drop (3) |
|------------------------------|--------------|-------|-------------|--------|-------------------------|--------------------------------|----------------|-------------------|
| | V.ph.Hz | kW | A | | A | mm ² | m ² | Pa |
| RTC and RTH07L | 230.1.50 | 5 | 22 | 1 | 25 | 4 | 0.12 | 6 |
| RTC and RTH07L to 10L | 400.3.50 | 5 | 8 | 1 | 10 | 2.5 | 0.12 | 6 |
| RTC and RTH07L to 10L | 400.3.50 | 10 | 15 | 1 | 20 | 2.5 | 0.12 | 6 |
| RTC and RTH15L to 30L | 400.3.50 | 5 | 8 | 1 | 10 | 2.5 | 0.12 | 6 |
| RTC and RTH15L to 30L | 400.3.50 | 10 | 15 | 1 | 20 | 2.5 | 0.19 | 15 |
| RTC and RTH15L to 30L | 400.3.50 | 15 | 22 | 1 | 25 | 4 | 0.19 | 15 |

Notes: 1.- K curve (DIN. VDE 0660-104). 2.- Based on copper conductors. 3.- Considered the nominal air flow of the indoor section.

Dimensions with packing and weights

| Heater model | Dimensions with packing mm | | | Weight kg |
|-------------------------------|----------------------------|-------|-------|-----------|
| | Height | Width | Depth | |
| RTC and RTH07L and 10L | 360 | 513 | 293 | 15 |
| RTC and RTH15L to 30L | 440 | 640 | 370 | 20 |

Installation

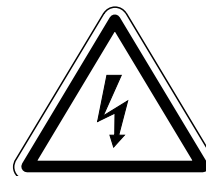
Install the electric heater in the RTC and RTH unit as follows:

- 1) In all cases, the **established national regulations** should be followed.
- 2) Disconnect the power supply to the air conditioning unit.
- 3) Install the magnetothermal and differential switches for the heater in accordance with the table of General Characteristics and the Wiring Diagrams.
- 4) Remove the access panels of the RTC and RTH unit control box.
- 5) Unpack the accessory, opening the top of the box. Make sure the heater assembly has not been damaged during transportation. Check the ceramic insulation and that the heater wires are not in contact with any metal parts.
- 6) Fit the electric heater in the mouth of the indoor fan panel housing and drill eight 3 diameter holes for fastening. Check to make sure that the reset push button of the F9 thermal switch is accessible and at the top. See Heater Location diagram.
- 7) Fasten the PVC gasket, supplied with the accessory, to the frame surface of the heater adjacent to the indoor fan panel.
- 8) Fasten the heater to the panel with the screws supplied.
- 9) Remove the electrical connections cover of the heater and connect the power supply cables to connecting strip X1. Connect the control cable supplied, between connector J1 of the A3 Auxiliary Resistance board, and connector J10 of the A1 control board of the air conditioning unit.
- 10) The installer should complete the electric circuit of the heater by fitting an air flow control F14 at the most convenient point of the ducts so as to make sure the heater

operates only when there is sufficient air flow.

- 11) Connect power supply to the RTC and RTH unit and the heater.
- 12) To configure the accessory, press the test button of control board A1 for over 2 seconds, until the red led on the board goes on. Configuration will be complete when said led goes off.
- 13) Check operation of the heater by selecting the Emergency Heat mode at the ambient thermostat of the air conditioning unit.
- 14) Assemble the electrical box covers of the heater and the RTC and RTH unit.

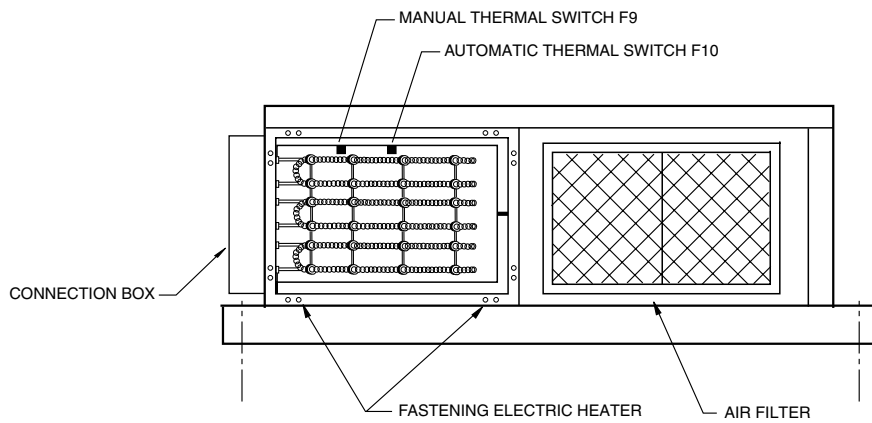
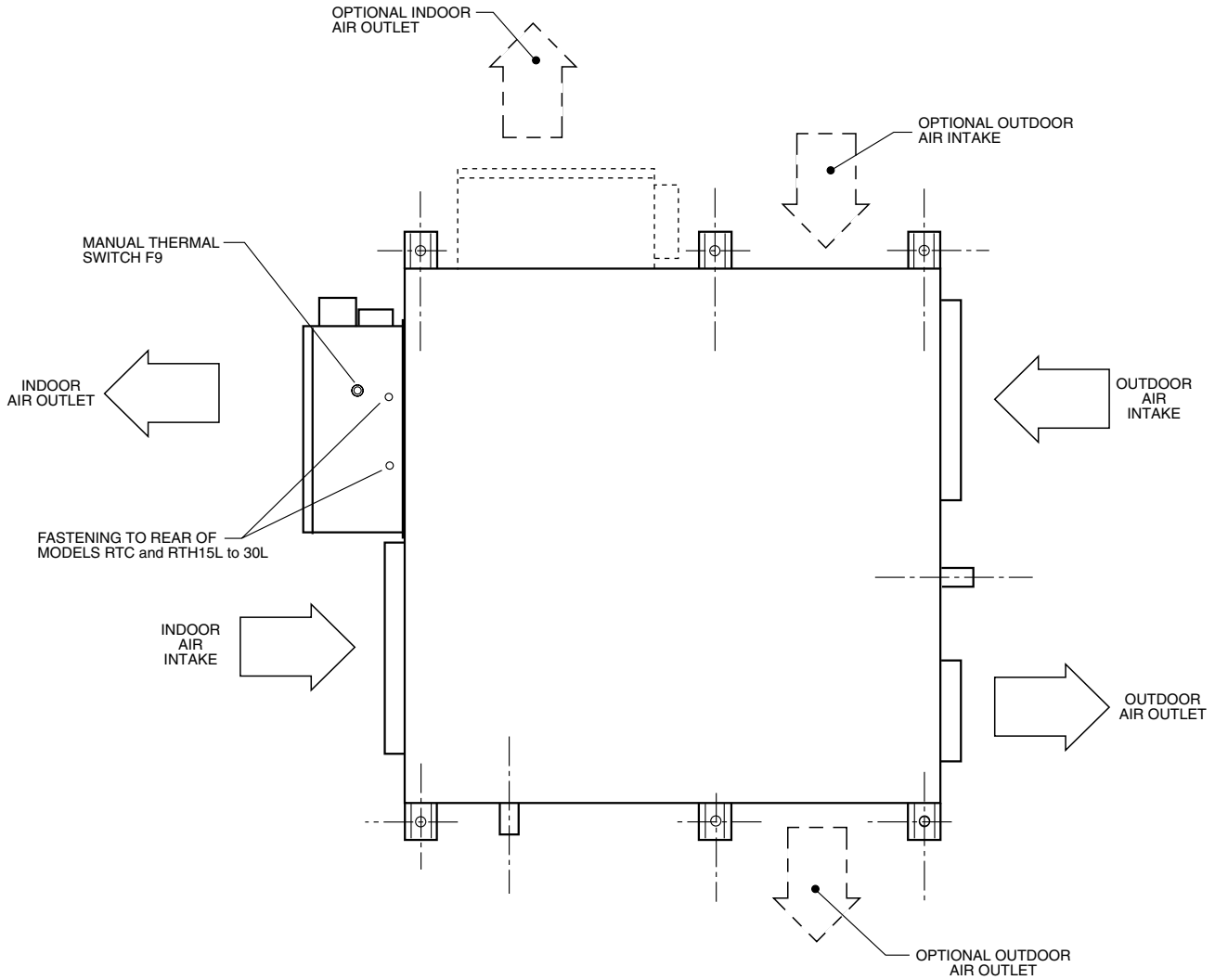
Note: Should an incorrect response of the system take place, see the Operation section of the RTC and RTH Installation Instructions. There you will find the control functions of the A1 electronic board on the heater, as well as its configuration, incidents identification, etc.



Loose cables can cause overheating of the terminals or incorrect operation of the unit. Fire hazards may also arise. Therefore, make sure all cables are connected tightly.

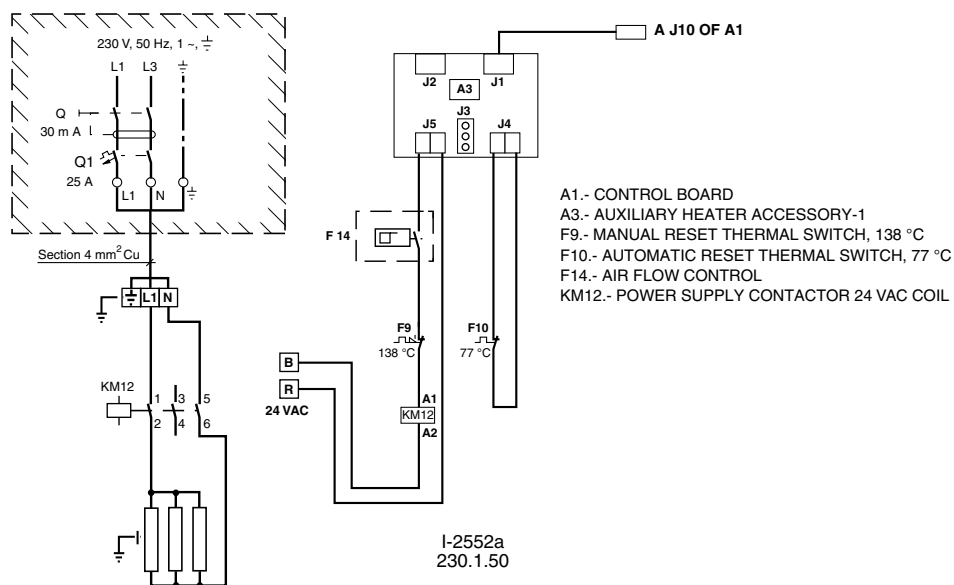
Heater location

RTC and RTH07L to 30L



Wiring diagram

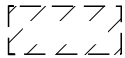
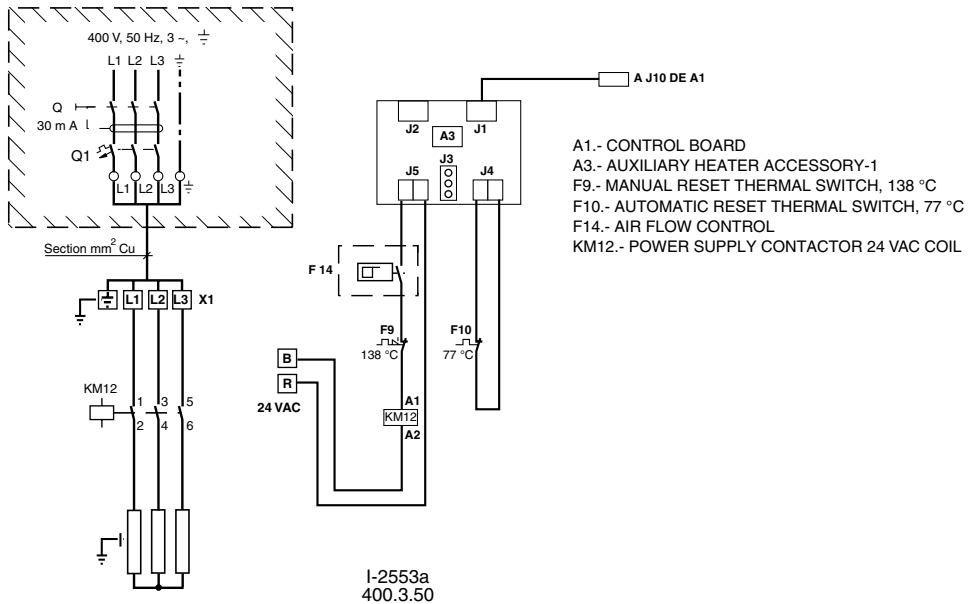
Heater 5kW, 230.1.50
RTC and RTH07L



Wiring diagram

Heater 5, 10, 15kW, 400.3.50
RTC and RTH07L to 30K

| POWER kW | AUTOMATIC SWITCH Q1 | MINIMUM CABLE SECTION mm ² |
|-------------|------------------------|--|
| 5 | 10 | 2.5 |
| 10 | 20 | 2.5 |
| 15 | 25 | 4 |



THE COMPONENTS INCLUDED IN THESE BOXES ARE NOT SUPPLIED BY THE MANUFACTURER

IMPORTANT: THE AUTOMATIC SWITCH SIZING AND POWER SUPPLY LINE SECTION ARE ORIENTATIVE AND SHOULD BE CORRECTED IN ACCORDANCE WITH JOB SITE CONDITIONS AND LEGISLATION IN FORCE

Low Ambient Kit for RTC-7L, 10L and 15L

Location of components

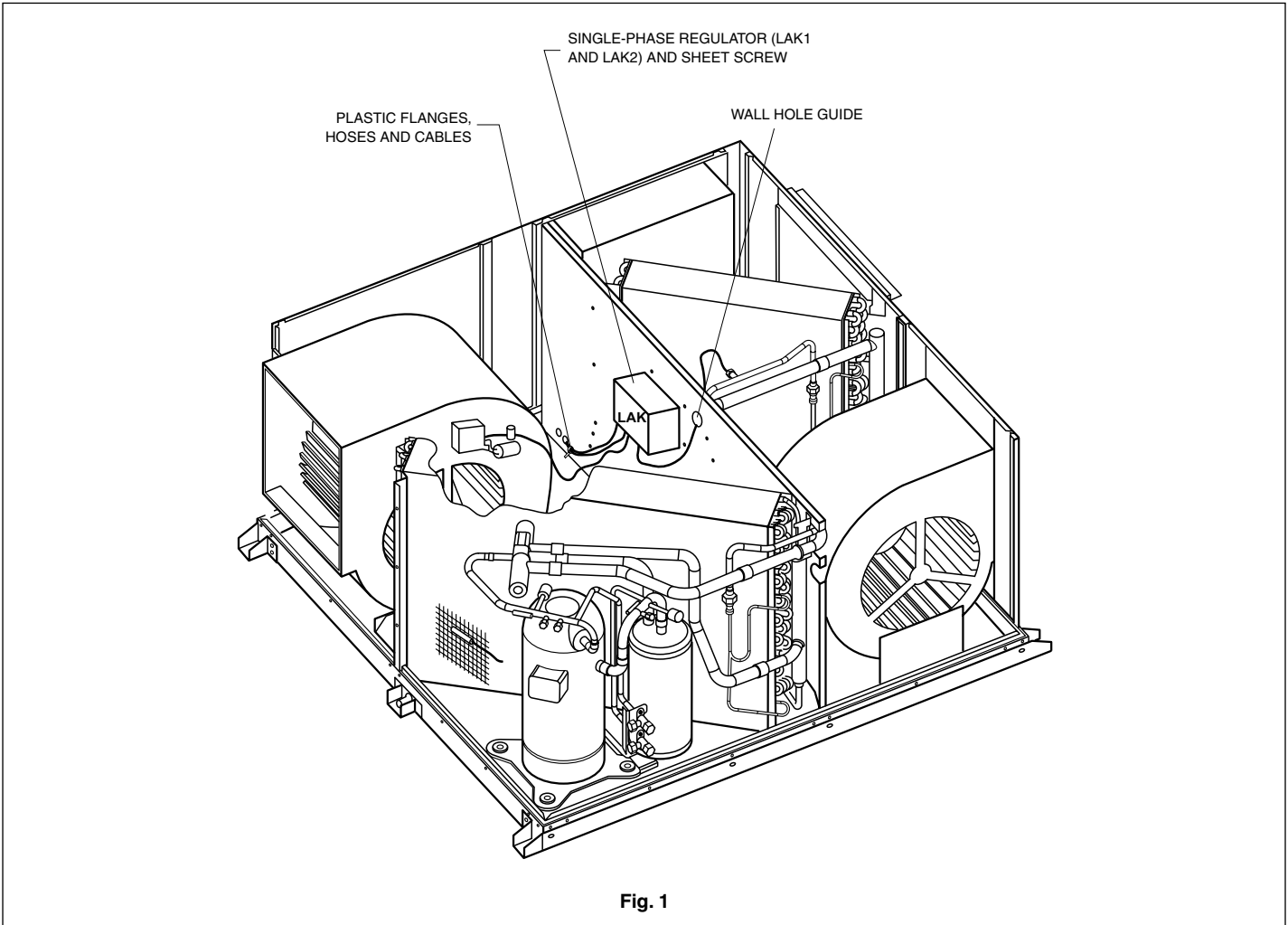


Fig. 1

Connection of hoses at electric box

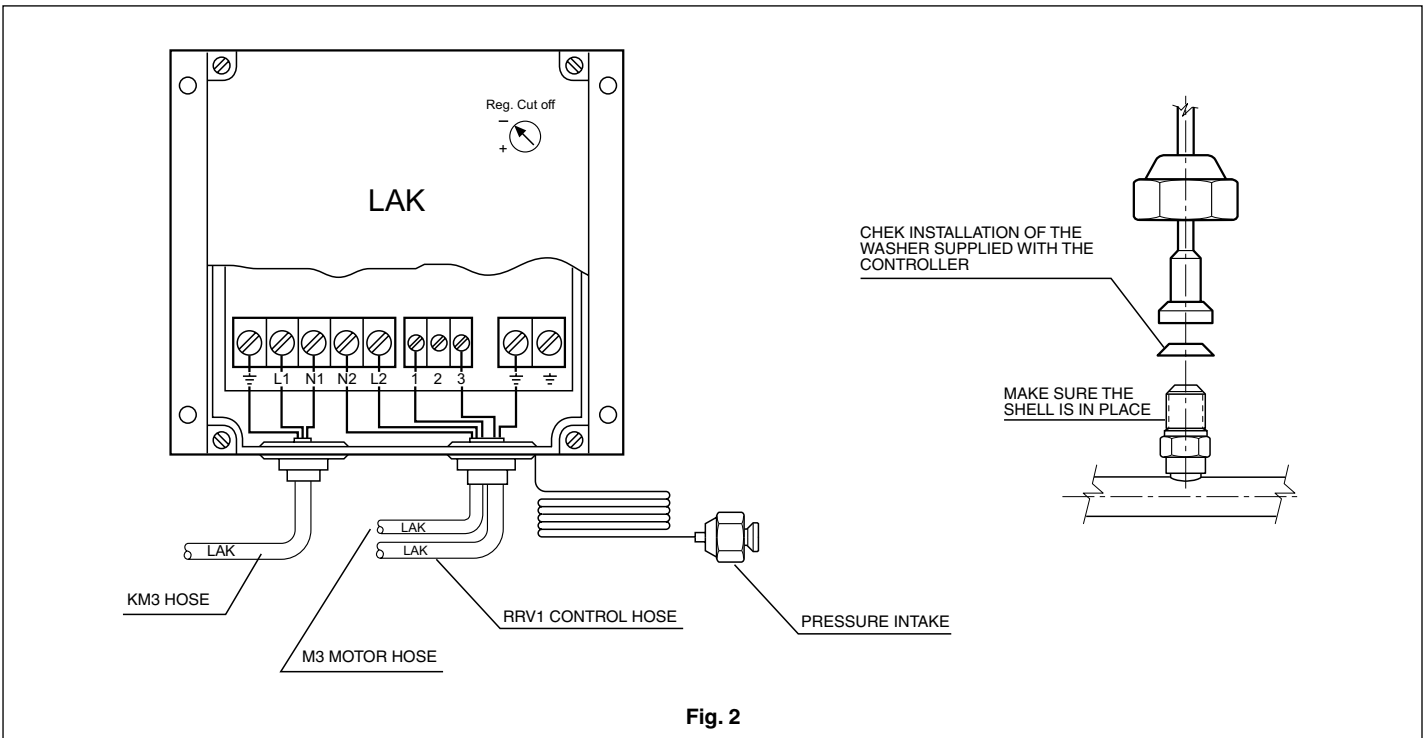


Fig. 2

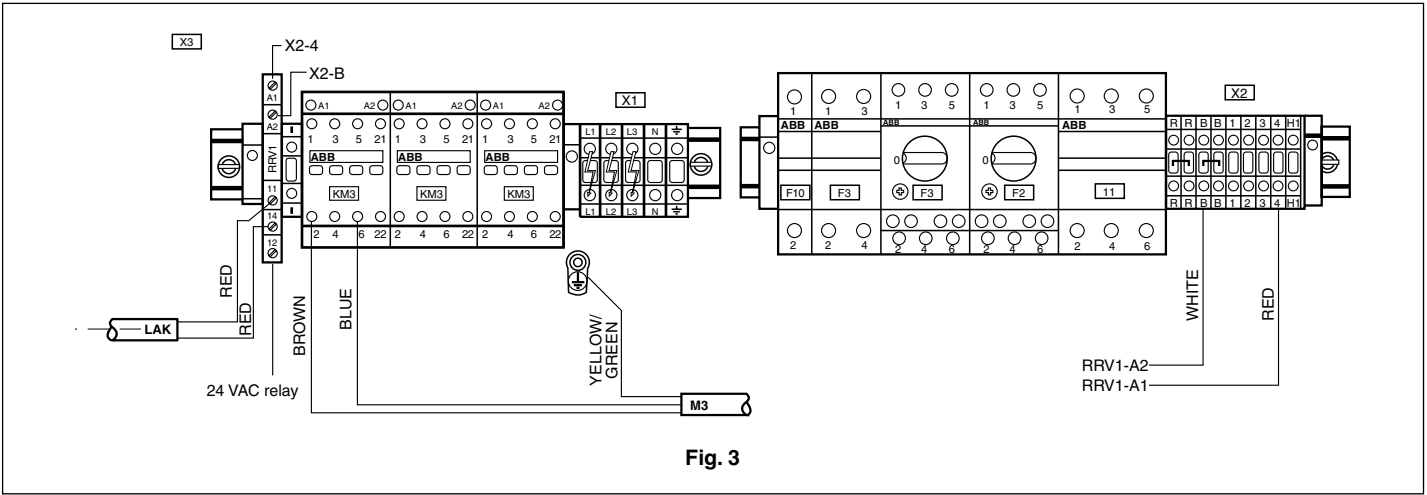


Fig. 3

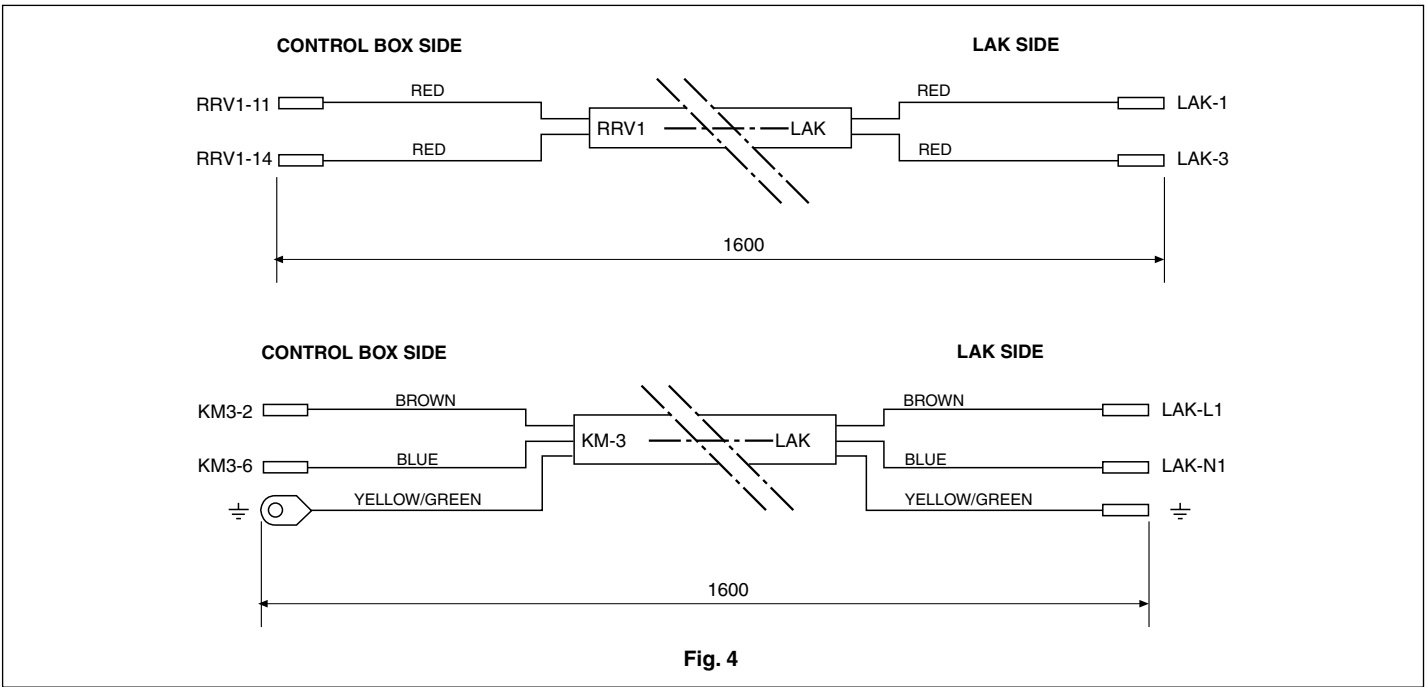


Fig. 4

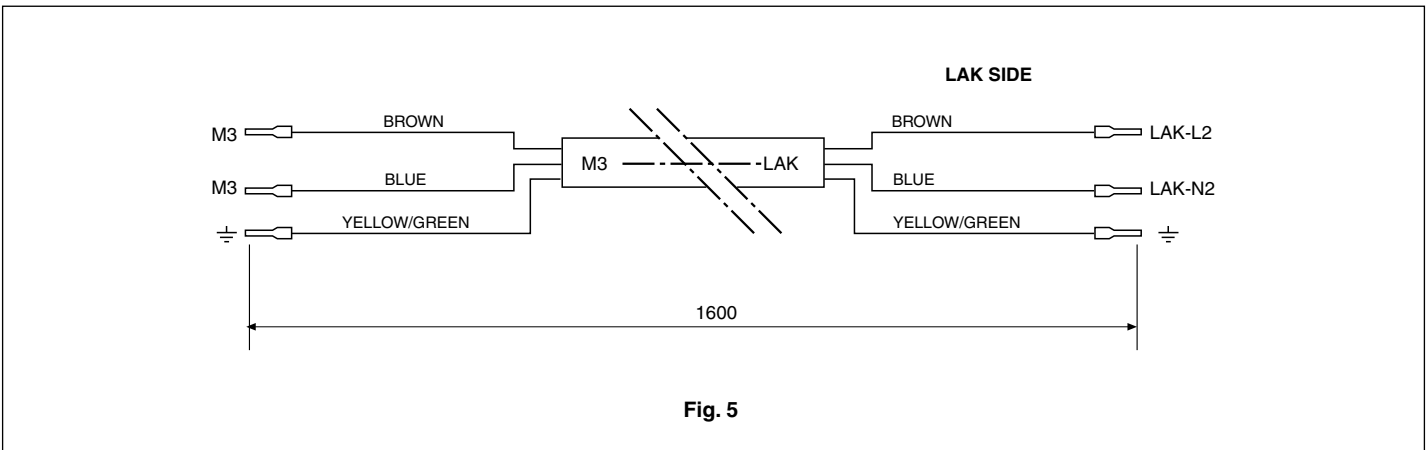


Fig. 5

| Cable No. | Cable | | Diagram | | | Cable length |
|-----------|-------|---------|---------|----|---------|--------------|
| | Color | Section | From | To | | |
| 1 | White | 1 | X2-B | | RRV1-A2 | 360 |
| 2 | Red | 1 | X2-4 | | RRV1-A1 | 400 |

General information

The condensation control accessory (Low Ambient Kit) is factory-fitted as an option.

The electronic module controls the outdoor fan speed in cool cycle to keep the condensing pressure constant at low outdoor temperatures. This control is not carried out in the winter cycle, and fans operate at 100% capacity.

The regulator is located on the separator panel, on the outdoor fan side (M3).

Technical specifications

This accessory includes the following components:

- Single-phase speed regulator, ref. P215DP (LAK).
Cut-off regulation.
- Pressure switch set to 30 bar.
- 24 VAC terminal relay (RRV1) for RTH.
- Connecting hose and cables.
- Screws, wall hole guide and plastic flanges.

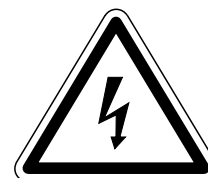
Installation

Disconnect main power supply to the unit with switch Q1. See Figs. 1, 2, 3, 4, 5 and wiring diagram for details on assembly and wiring connections.

Install the condensation control unit as follows:

1. Remove the top cover and access panels to the outdoor fan.
2. Install the speed regulators (LAK) on the separator panel, using the screws supplied. On heat pump models (RTH), connect the 24 VAC relay (RRV1) to terminal X3.
3. Connect cables inside the electric box in accordance with the wiring diagram.
4. Disconnect the outdoor fan (M3) hose from the KM3 contactor side, and connect same to the LAK side at terminals L2, N2 and ground. Connect the supplied outdoor fan hose to contactor KM3 on the electric box and connect terminals L1, N1 and ground to the LAK side.
5. Connect the control hoses of heat pump models (RTH) to terminals 11 and 14 of the RRV1 relay and on the LAK side of terminals 1 and 3.
6. Install the wall hole guide on the separator panel and insert the pressure switch pressure intake.
7. Connect the pressure intake of the pressure switch to the high pressure intake at the condenser outlet and make sure there are no leaks.

8. Check correct operation. Set maximum fan output regulation (LAK) and disconnect the magneto thermal switch of the compressor (F1). Connect power supply to the unit with switch Q1. Activate stage 1 of cool and make sure contactors KM1, KM2 and KM3 are enabled. The outdoor fan, M3, should rotate 100%. With a voltmeter, check the output voltage (230 VAC) at terminals L2 and N2 of the LAK1 regulator. Set output to a minimum (cut-off). Make sure the outdoor fan turns off.
9. If the unit is heat pump (RTH), activate stage 1 of heating and make sure the outdoor fan M3 rotates 100%. Deactivate this stage.
10. Connect the magneto thermal switch to the compressor (F1).
11. Replace the top cover and the access panel to the outdoor fan.



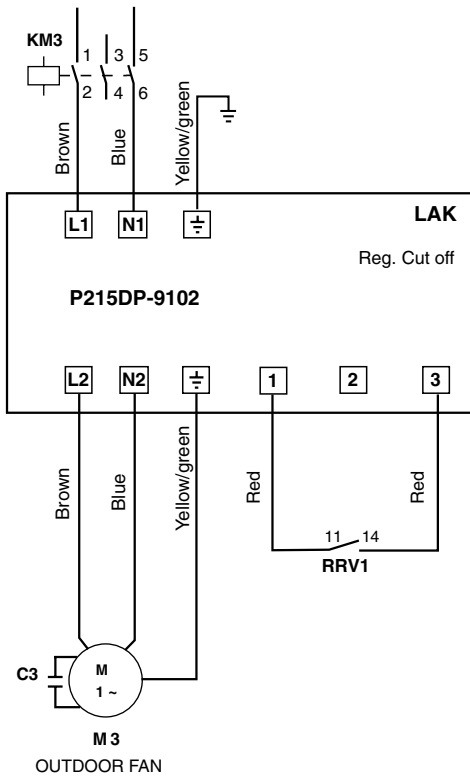
Loose cables can cause overheating of terminals or incorrect operation of the unit. Fire hazards may also exist. Therefore, make sure all cables are connected tightly.

Operation

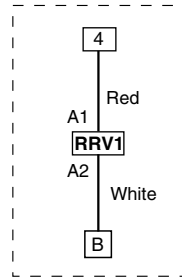
In summer cycle, allows adjusting outdoor fan speed to keep a constant condensing pressure at low outdoor temperatures. The pressure switch is factory-set to 30 bar. This setting can be modified with the adjusting screw on the pressure switch. Clockwise increases pressure and counter clockwise decreases pressure.

On heat pump models, the control has an intake that, in heat cycle, remains closed through the contact on the cycle changeover relay (RRV1). Fan speed at maximum (output voltage 230 VAC).

Wiring diagram for RTC 07L, 10L and 15L



Install on models
RTH07L, 10L, 15L

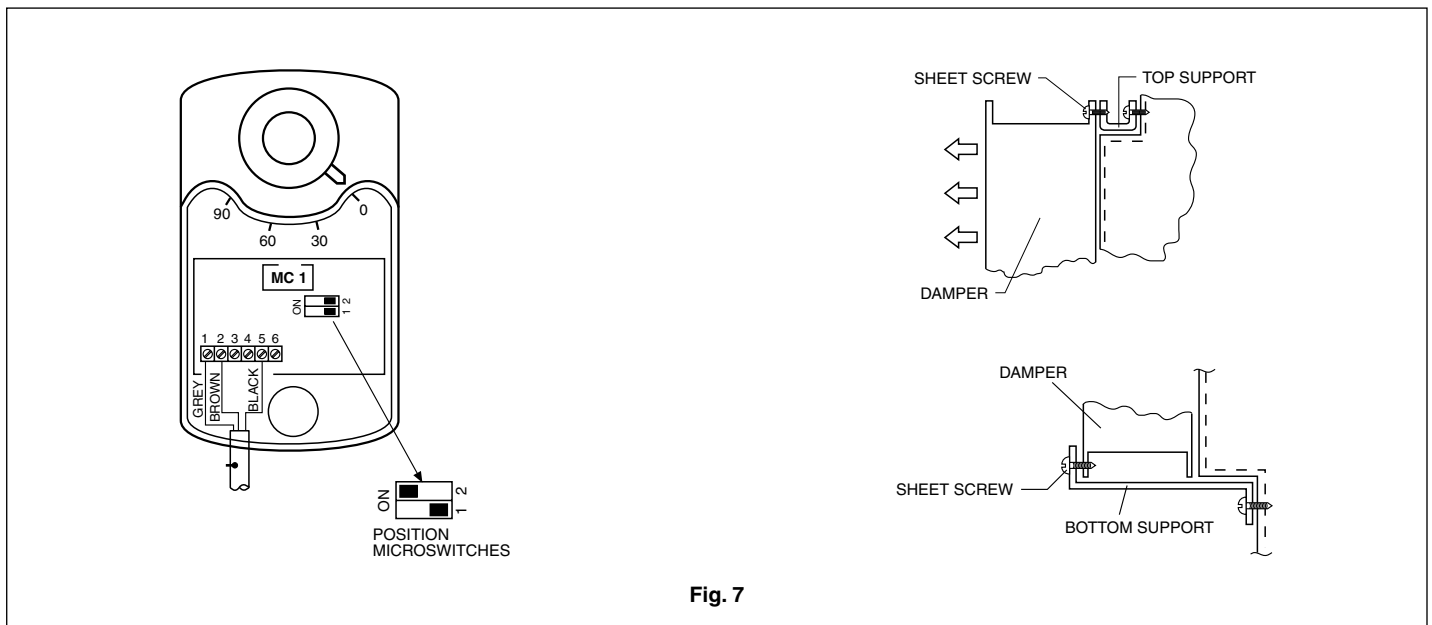
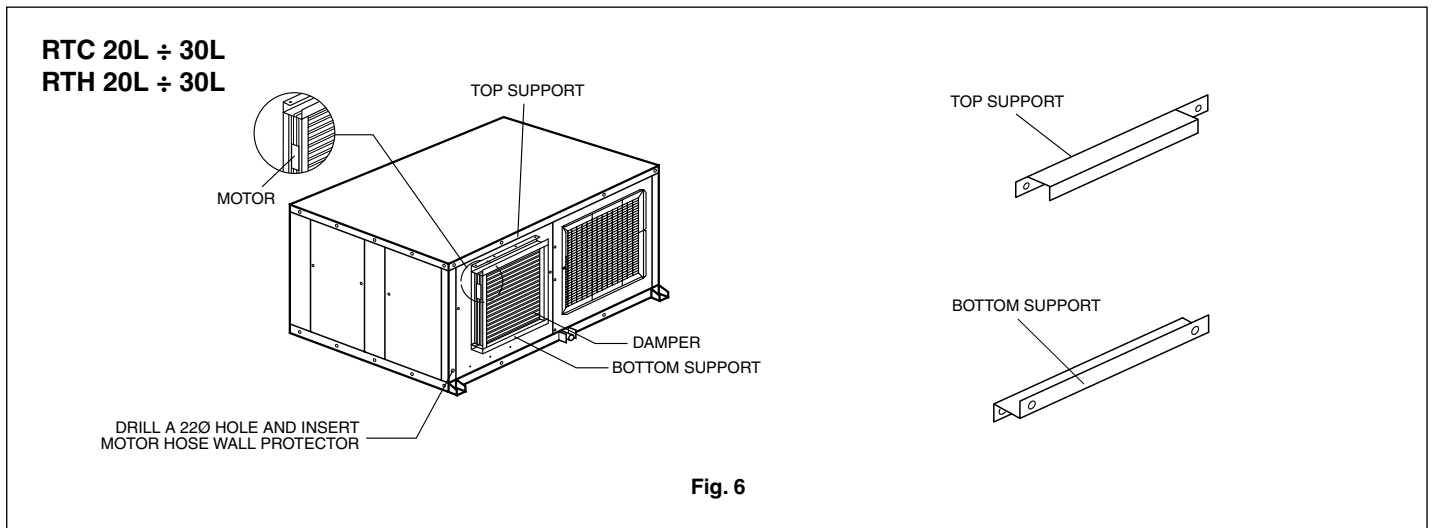


RRV1 - 4-way valve relay
LAK - Low ambient kit
M3 - Outdoor fan motor
KM3 - Outdoor fan contactor

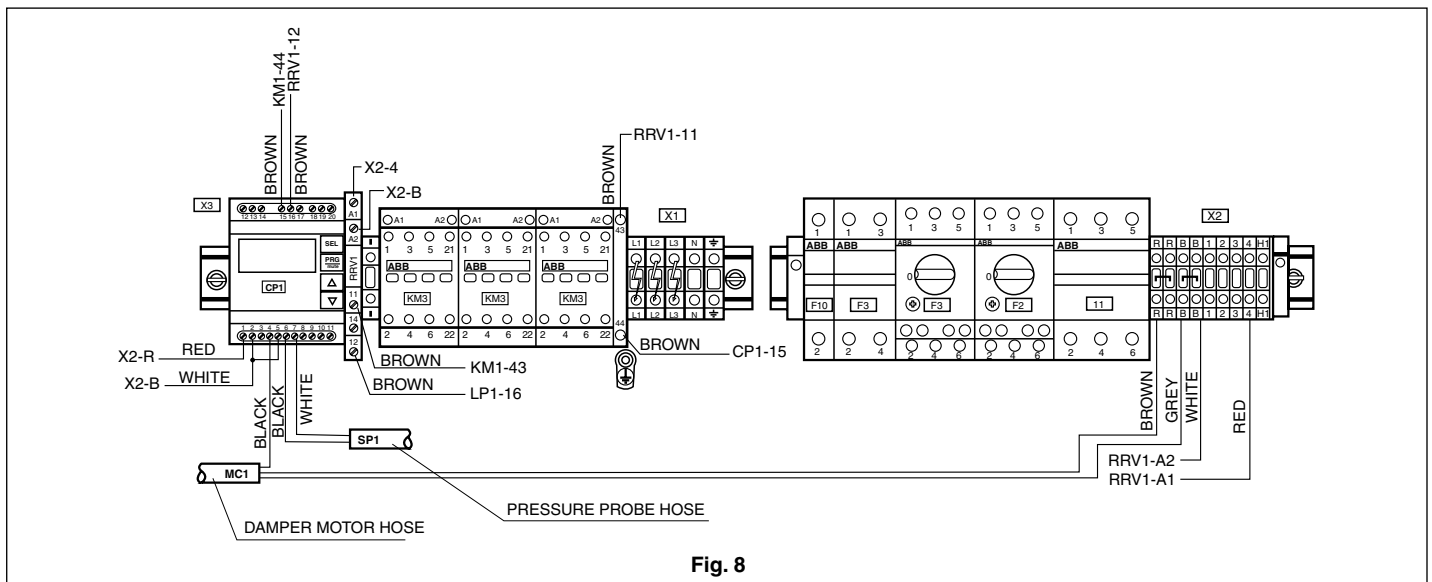
I-2563a
LAK ACCESSORIES
RTC07L, 10L, 15L
RTH07L, 10L, 15L

LAK condensing pressure control for RTC-20L, 25L and 30L units

Location of components



Connection of hoses in electric box



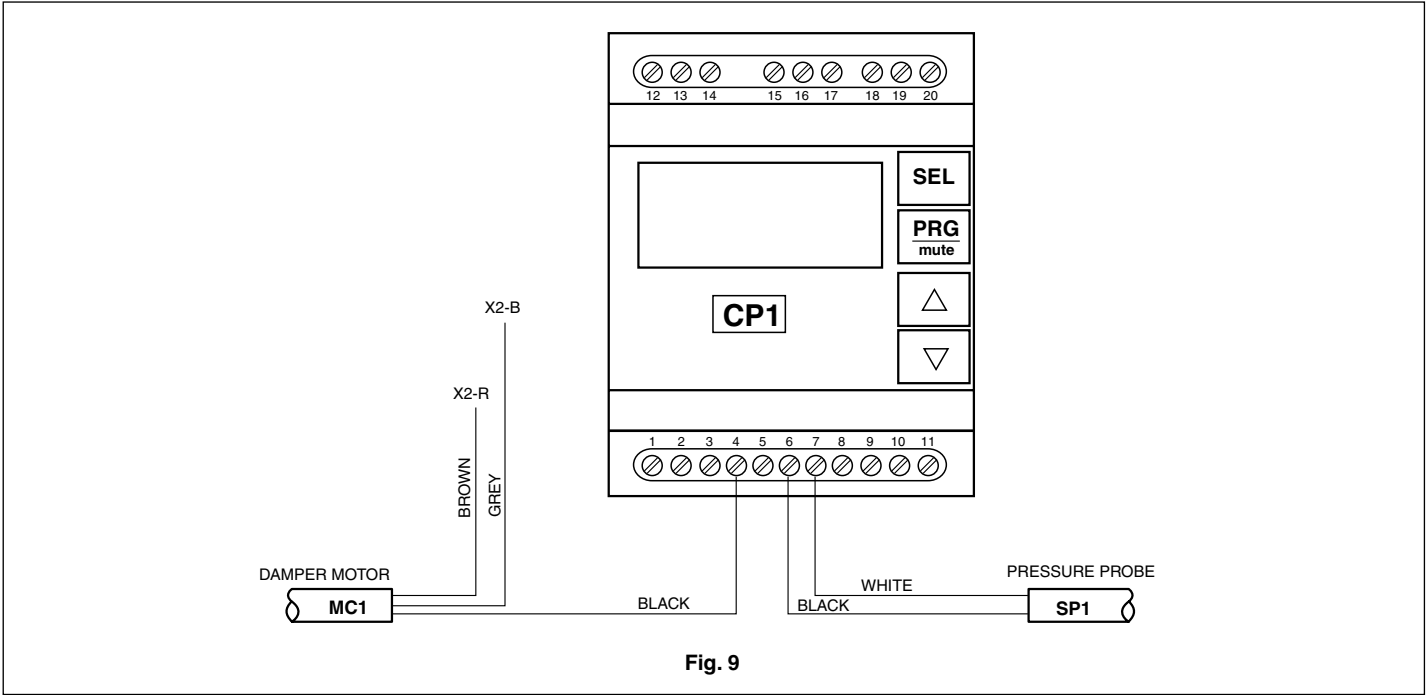


Fig. 9

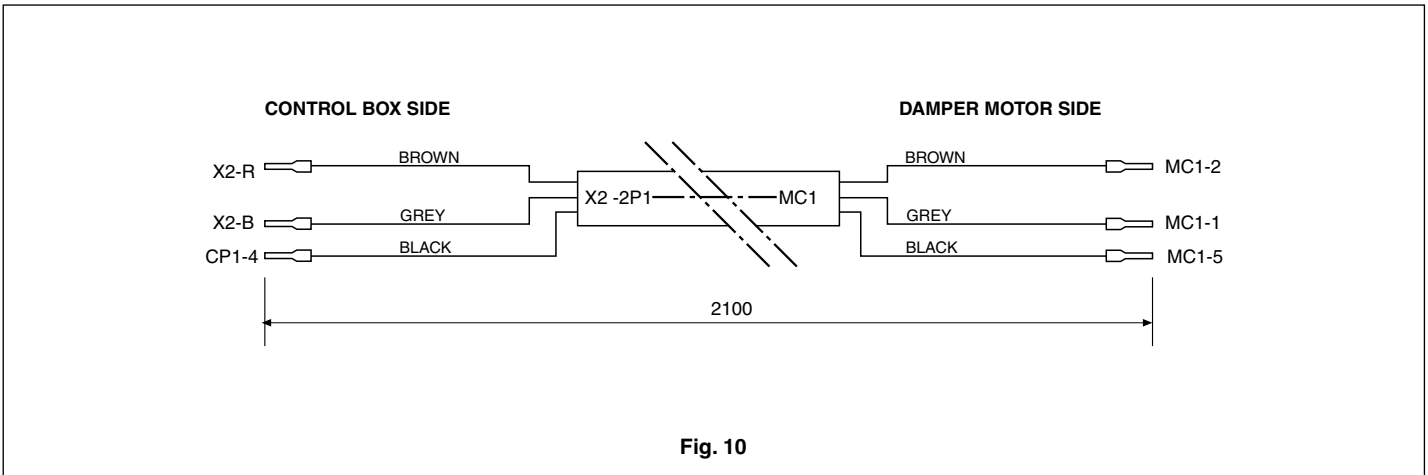


Fig. 10

| Cable No. | Cable | | Diagram | | | Cable length |
|-----------|--------|---------|---------|---------|-----|--------------|
| | Colour | Section | From | To | | |
| 1 | Red | 1 | X2-R | CP1-1 | 500 | |
| 2 | White | 1 | X2-B | CP1-2 | 490 | |
| 3 | White | 1 | CP1-5 | - | 160 | |
| 4 | Brown | 1 | CP1-15 | KM1-44 | 570 | |
| 5 | Brown | 1 | KM1-43 | RRV1-11 | 440 | |
| 6 | Brown | 1 | RRV1-12 | CP1-16 | 590 | |
| 7 | Red | 1 | X2-4 | RRV1-A1 | 500 | |
| 8 | White | 1 | RRV1-A2 | X2-B | 600 | |

General information

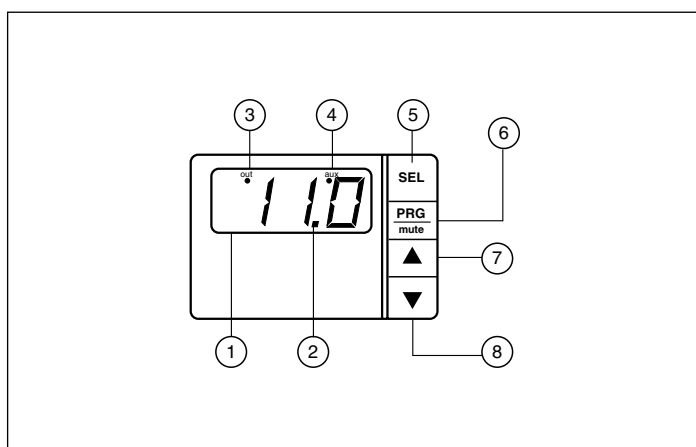
In the summer cycle, this accessory controls the condensing pressure by varying air flow in the outdoor coils. This air flow variation keeps the condensing pressure constant when outdoor temperatures are low.

Operation

By means of the pressure detected by the control unit through the analogical pressure switches installed in the cooling circuit, and carrying out the appropriate calculations in accordance with the settings, this control unit gives off an analogical signal that positions the opening of the dampers in such a way that the previously programmed set point condensing pressure is maintained.

Programming and adjustment

Keys and display (description of the control unit)



- 1) Display:
 - Displays the value of the pressure switches.
 - Displays the code of the alarms produced.
- 2) Decimal LED:
 - Is lit when the value has a decimal part.
- 3) OUT LED:
 - Is lit constantly when the 0V output is different.
 - Flashes when the output is at the maximum programmed value.
- 4) AUX LED:
 - Is lit or flashes, depending upon the operating mode selected.
- 5) **(SEL)** key:
 - Displays and/or selects the set point value.
 - If pressed along with the **(Prg/Mute)** key for 5 seconds, 00 appears on the display. Using the **(▲)** **(▼)** keys, select the access code to enter the main programming mode, parameters "Cxx".
- 6) **(Prg/Mute)** key:
 - If pressed for 5 seconds, the basic programming mode is accessed, parameters "Pxx".
 - If an alarm is produced, pressing once deactivates the acoustic signal. If pressed a second time, the alarm is reset.
- 7) **(▲)** key:
 - In standby mode, displays pressure switch 1 value.
 - In programming mode, it is used to move on to the next parameter and to increase the values of same.

- 8) **(▼)** key:
 - In standby mode, displays pressure switch 2 value.
 - In programming mode, it is used to move on to the previous parameter and to decrease the values of same.

Necessary settings

- Single compressor unit:

| Parameter | Value |
|-----------|-------|
| St1 | 26 |
| C00 | 3 |
| P01 | 2 |
| C03 | ∅ |
| C04 | ∅% |
| C05 | 100% |
| C10 | ∅ |
| C13 | 6 |
| C14 | ∅ |
| C15 | ∅.∅ |
| C16 | 44.8 |
| C19 | ∅ |
| C30 | 4 |

Programming sequence

- 1.- Press **(SEL)** for 2 or more seconds, until "St1" appears on the display. After displaying "St1" for one second, the present "St1" value will appear.
- 2.- By means of the **(▲)** **(▼)** keys, change this value to the value indicated in the above tables.
- 3.- Press **(SEL)** to confirm the new value. "St2" will appear on the display, but it should not be programmed. Press **(SEL)** once again to exit the programming mode.
- 4.- To program C00, press **(SEL)** and **(Prg/Mute)** simultaneously for 5 seconds, until "00" appears on the display.
- 5.- By means of the **(▲)** **(▼)** keys, enter the password "77" to access the "Cxx" parameters. Press **(SEL)** to confirm.
- 6.- Use the **(▲)** **(▼)** keys to move through the different "Cxx" parameters, until reaching "C00".
- 7.- Press **(SEL)** to view current value.
- 8.- By means of the **(▲)** **(▼)** keys, set the values indicated in the above tables, as required.
- 9.- Press **(SEL)** to confirm the change.
- 10.- Press **(Prg/Mute)** to save the changes and exit the programming mode.
- 11.- To program "P01", press **(Prg/Mute)** for 5 seconds, until "P01" appears on the display.
- 12.- Press **(SEL)** to access the current value.
- 13.- Use the **(▲)** **(▼)** keys to modify the value in accordance with the above tables.
- 14.- Press **(SEL)** to confirm the change.
- 15.- Press **(Prg/Mute)** to save these values and exit the programming mode.
- 16.- To program the remaining "Cxx" parameters, press **(SEL)** and **(Prg/Mute)** simultaneously for 5 seconds, until "00" appears on the display. Enter the password "77" and press **(SEL)** to confirm.
- 17.- By means of the **(▲)** **(▼)** keys, move through the different "Cxx" parameters, and then use **(SEL)** to access and validate the values and the **(▲)** **(▼)** keys to modify these parameters in accordance with the above tables.

Horizontal air discharge assembly

- 0.- Check to see the packing is not damaged. Unblock the motor and make sure the slits open and close correctly by applying force.
- 1.- Disconnect power supply to the unit.
- 2.- Install the lower support supplied, as in figure 1. Fasten the support with the self-threading screws of the accessory.
- 3.- Lean the dampers on the previously fitted support, with the motor at the point nearest the control panel (Fig. 7).
- 4.- Install the top support and fasten it to the chassis of the unit by means of the drilled holes and self-threading screws supplied (Fig. 7).
- 5.- Fasten the dampers to the lower and top supports with the self-threading screws supplied (Fig. 7).
- 6.- Open the control panel and remove the roof cover.
- 7.- Fit the CP1 control unit in the DIN guide on the X3 connecting strip side. On models RTH, also install relay RRV1 (Fig. 8).
- 8.- Move contactors KM1 and KM2 to attach the side auxiliary contacts supplied.
- 9.- Screw the high pressure intake switch on to the condensing unit output and check for leaks. But first unscrew and remove the plugs that protect same.
- 10.- Connect the pressure switch hose and fasten it by means of the clamps supplied along with the existing wiring cables.
- 11.- Insert the pressure switch hose through the hole on

the separator panel, and install the 28 ø wall hole guide supplied.

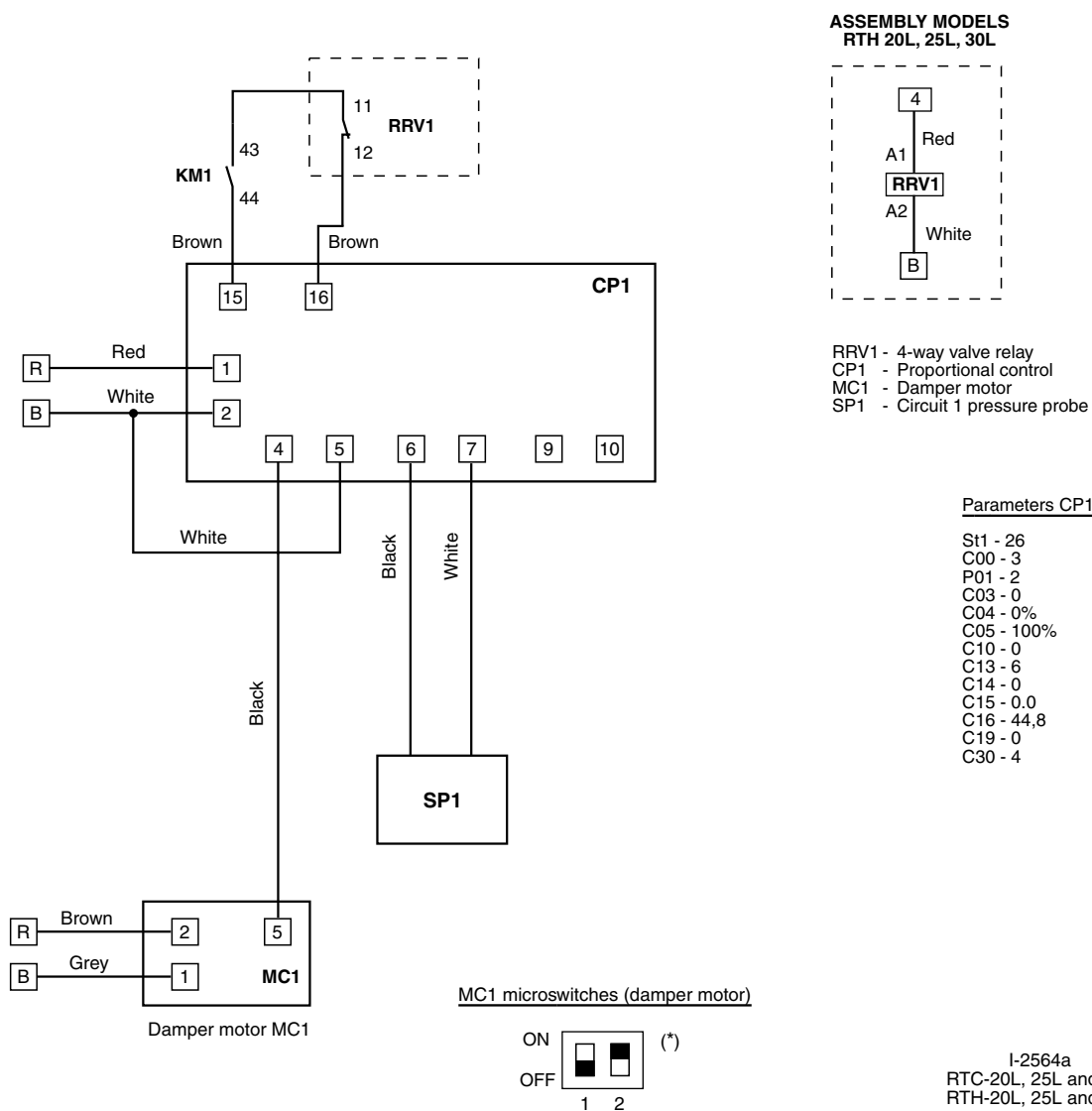
- 12.- Connect the pressure switch hoses to control unit CP1.
- 13.- Remove the damper motor cover, insert the damper hoses and connect as indicated on the corresponding diagram (Fig. 7).
- 14.- Drill a 22 Ø hole and insert the wall hole guide for the damper motor hose.
- 15.- Connect all cables supplied, in accordance with the corresponding wiring diagram.
- 16.- Turn main power supply on and program the control unit.
- 17.- Close all panels.

Checking

- 1.- Program the thermostat in the winter cycle (pumps only), start the compressors and make sure the dampers open completely.
- 2.- Turn the unit off and program the thermostat in the summer cycle.
- 3.- Start the compressors and check to be sure that when the pressure begins to rise above the programmed 26 bars, the dampers begin to close.

Once this pressure is reached, the dampers open to a specific position, depending upon the outdoor temperature. With a very low outdoor temperature, the dampers should be closed.

Wiring diagrams for RTC 20L, 25L y 30L



(*) The position of the damper in standby (0V set point between 1 and 5 of MC1) should be open. With signal (0-10 Vdc), the damper should close. Set switch 2 to ON/OFF position to carry out this logic.

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